



# Globalization Report 2020

Who benefits the most from globalization?



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English translation of the German original text

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# Summary

Japan is the “globalization champion” 2018. No other country has achieved a greater globalization-induced increase in per capita income in the period from 1990 to 2018. This is how the results of the Globalization Report 2020 can be summarized.

This report periodically examines development of global economic integration based on a comprehensive database. It forms a reliable standard for analysis of current matters of globalization. The Globalization Report 2020 comprises three parts: The first part is based on previous studies and examines in how far 45 economies of the world have benefited from globalization in the past. It also shows that a high degree of globalization is associated with a high degree of social sustainability, while the conclusion is different for environmental sustainability. The second part explicitly considers dependence on foreign trade as part of globalization as a side note. It also examines the potential impact of the coronavirus pandemic on countries’ value chains. The third part of this report illustrates the extent and development of globalization in all 45 countries examined in figures and tables.

The main findings can be summarized as follows:

- “Globalization champion” Japan achieved the greatest absolute growth in real gross domestic product per capita as a result of globalization in the period from 1990 to 2018. Ireland, Switzerland, and Finland follow closely behind. Emerging markets, which have benefited much less than other countries from the progress of globalization measured in terms of absolute income gains per capita in spite of some pronounced dynamics, remain on the lower ranks. This is true even though some of these countries have achieved income gains that are significantly higher when put in relation to their economic performance.
- Social sustainability is also more relevant in countries with high levels of globalization. However, this correlation is not causative since a higher globalization dynamic does not coincide with a higher growth rate in the social sustainability index. In contrast, the extent of environmental sustainability does not correlate with the level of globalization. Globalization-induced income gains do not appear to be used to promote environmental sustainability.
- The strongest dependence on foreign trade can be found in small European countries such as Luxembourg, Ireland, and Belgium as well as in the Central Eastern European countries of Hungary, Slovakia, the Czech Republic, Lithuania, Estonia, and Slovenia. The United States and Brazil show the least dependence. A comparison with the global financial and economic crisis allows us to describe the potential impact of the coronavirus pandemic on countries. Countries that depend more strongly on foreign trade are, therefore, at greater risk of an economic loss.
- The coronavirus pandemic is bound to reduce the income gains induced by globalization. Based on initial approximate calculations for the year of 2018, the pandemic is expected to reduce the difference of 1,400 euros between the gross domestic product per capita with and without globalization in Germany in 2018 by 100 to 500 euros. The cumulative impact of the pandemic, i.e. the effect on the total annual income gains since 1990, will be significantly lower.

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# 1 Introduction

Who benefits the most from globalization? The degree of growth in gross domestic product (GDP) per capita between 1990 and 2018 due to an increase in globalization is determined for a total of 45 countries. Chapter 2 determines for each of these 45 countries whether and in how far globalization took place in the period 1990 to 2018 and what share of the increase in economic output is attributable to it. Additionally, the Globalization Report focuses on social and environmental sustainability for the first time in Chapter 2.4. The report highlights whether there is at least a descriptive connection between the scope of globalization on the one hand and the degree of social and ecological sustainability on the other.

In light of the coronavirus pandemic slowing down worldwide economic activity in the spring of 2020, it is not clear at this time whether a structural break in globalization will occur and whether we are facing the onset of a phase of deglobalization. Since data for the year of 2020 are not available yet, any statements on the influence of the pandemic on globalization in the countries analyzed are in part speculative. However, initial calculations for Germany at the end of Chapter 3 suggest that the impact of the pandemic on the globalization-induced growth of gross domestic product per capita may well be considerable at the current margin of the analysis period.

Analyses of historical data on global trade interrelations also permit an assessment of which of the 45 countries are expected to be more strongly affected by a pandemic-related decline in globalization. Due to this, Chapter 3 presents a foreign trade dependency index to reflect the potential economic impact of countries in the face of a global crisis such as the coronavirus pandemic. Comparison to the financial and economic crisis of 2008/2009 also presents plausibility of the dependency

index as an indicator of the decline in economic performance due to global crisis.

On top of this, well-structured fact sheets are provided for each of the 45 countries, summarizing the key findings of the Globalization Report for the individual countries at a glance.<sup>1</sup>

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<sup>1</sup> The fact sheets use approximations to improve clarity and plausibility.

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## 2 Who benefits the most from globalization?

The growth effects of globalization are measured based on an appropriate globalization index, which determines the development of globalization in the countries examined to make it quantitatively visible. This report is closely aligned with the established KOF Index of Globalization of the Eidgenössische Technische Hochschule Zürich (Dreher 2006).<sup>2</sup> An econometric analysis then establishes the causative relationship between globalization in the individual countries and their respective economic growth. This is the basis on which the respective growth effects of globalization are quantified. The changes to each country's economic performance due to globalization are then transferred into a ranking. Finally, the "globalization champion" is chosen. This is the country exhibiting the highest absolute growth in per capita income (a brief description of the methodology is provided in the first box).

### 2.1 Results of the globalization index

Two highly developed, well connected, and relatively small EU countries lead the ranking with a generous margin: The Netherlands and Ireland achieve more than 90 index points (Table 1). The subsequent ten ranks are also held by member states of the European Union, and by Switzerland, which is also closely integrated into the structures of the European Single Market through numerous bilateral agreements. The most strongly globalized non-European countries follow on places 13 (Canada) and 21 (Australia).

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<sup>2</sup> We analyze a total of 45 economies. As in the predecessor report, this includes the 42 countries of the macroeconomic multi-country VIEW model of Prognos AG. The model includes all highly developed economies and all major emerging markets. Together, these account for more than 90 percent of global economic performance. Apart from this, the two major emerging markets of Indonesia and Nigeria as well as Luxembourg are included in the current Globalization Report.

Among the larger European countries, the United Kingdom makes place 6. Note that the country was still an EU member in 2018, the current end of the analysis period. France, Germany, Spain, and Italy follow on the middle ranks. The United States ranks 25th, just behind this group of countries. The two East Asian countries of Japan and South Korea occupy ranks 33 and 36, respectively. This makes them the last among the group of highly developed economies. The major emerging markets, China, Nigeria, Brazil, Argentina, and India, show the least level of international integration.

The overall index of globalization contains the three economy (weighting: 60 percent), social and political (weighting: 20 percent each) sub-indices. The economy sub-index maps indicators of cross-border integration in the areas of trade in goods and services, wage income, and capital flows. In addition to transaction sizes, these values reflect restrictions such as capital controls. The social dimension comprises indicators of cultural proximity and personal contacts, among other things. Political globalization considers aspects such as the number of international treaties or membership of international organizations. Chapter 5 of the annex contains a detailed methodological description of the globalization index.

The countries under observation show different results across the three sub-indices. The two leading countries, the Netherlands and Ireland, are also at the top of the economy and social sub-indices, in the same order. The Netherlands is also a top performer in the political sub-index (Table 2).

The large emerging markets owe their low overall ranking primarily to their below-average scores in the economy and social sub-indices. Only the political sub-index has Brazil, an emerging market, in the upper section of the table. Other emerging markets come out in the middle of the field.



TABLE 1 The globalization index 2018

Ranking	Country	Points in the globalization index	Ranking	Country	Points in the globalization index
1	The Netherlands	92.39	24	Greece	62.00
2	Ireland	90.05	25	United States	61.62
3	Belgium	81.83	26	New Zealand	61.61
4	Switzerland	81.48	27	Poland	60.75
5	Luxembourg	79.69	28	Bulgaria	60.66
6	United Kingdom	75.12	29	Latvia	60.40
7	Denmark	75.09	30	Slovenia	60.10
8	Sweden	72.40	31	Romania	59.88
9	Austria	71.94	32	Chile	59.53
10	Finland	70.28	33	Japan	57.97
11	Portugal	69.70	34	Israel	56.92
12	Czech Republic	69.11	35	Turkey	48.80
13	Canada	69.05	36	South Korea	48.66
14	Slovakia	68.51	37	South Africa	47.28
15	Norway	68.27	38	Mexico	46.82
16	Hungary	68.27	39	Indonesia	44.41
17	Estonia	68.02	40	Russia	43.92
18	France	67.89	41	China	42.43
19	Germany	66.36	42	Nigeria	39.58
20	Spain	65.24	43	Brazil	39.45
21	Australia	63.79	44	Argentina	37.19
22	Lithuania	62.93	45	India	31.33
23	Italy	62.93			

Source: Prognos 2020 | BertelsmannStiftung

The poor results of emerging markets may seem surprising at first glance. China, in particular, is often called a “pacemaker of globalization”. In many emerging markets, however, the capital and financial markets in particular are much less internationally integrated than those of most industrialized countries. For example, integration of emerging markets into global financial markets has been slower than integration of foreign trade. Standardization of all transaction sizes of the economy sub-index with the size of the respective national economy shows a tendency towards reducing the placement of larger countries for methodical reasons. Measured in absolute foreign trade values, China is the “export champion”. Measured in relation to its economic output, however, the country – like the world’s largest economy, the USA – ranks near the bottom in international comparison of the trade indicator.

In addition to the technical aspect of standardizing all transaction sizes based on the respective economic performance, there are also content-related reasons for a lower international integration of larger countries on average. For example, the comparatively low value of the globalization index for Germany is at least partially due to economies of scale. In larger economies, the respective internal market tends to be more relevant than in smaller ones. As a result, the production of companies from smaller countries depends a lot more on international suppliers. In Germany, for example, the total of goods exports and imports in 2018 reached around 2.8 trillion US dollars. This was almost nine times as much as the results of the Czech Republic at 0.3 trillion US dollars. In relation to the gross domestic product, the reverse applies: The Czech Republic exported and imported goods amounting to a value of 128 percent of its economic output, measured by gross domestic product. This degree of openness is at 71 percent for Germany. Other indicators also show a comparable difference between the absolute and relative figures.

TABLE 2 Sub-indices of the globalization index 2018

Ranking	Country	Economy	Ranking	Country	Social	Ranking	Country	Political
1	The Netherlands	89.34	1	The Netherlands	97.02	1	Italy	99.11
2	Ireland	87.23	2	Ireland	96.78	2	France	98.61
3	Luxembourg	83.14	3	Belgium	96.08	3	Sweden	97.69
4	Belgium	72.31	4	Switzerland	95.99	4	Spain	97.20
5	Switzerland	72.10	5	Austria	95.79	5	The Netherlands	96.89
6	Denmark	62.65	6	Canada	94.62	6	United Kingdom	96.74
7	United Kingdom	62.46	7	Denmark	93.36	7	Austria	96.54
8	Estonia	62.15	8	Norway	91.61	8	Belgium	96.14
9	Sweden	58.59	9	United Kingdom	91.49	9	Switzerland	95.11
10	Czech Republic	57.36	10	Germany	90.95	10	Brazil	94.73
11	Slovakia	57.27	11	France	90.85	11	Denmark	94.16
12	Finland	56.57	12	Portugal	89.88	12	Finland	93.87
13	Austria	55.80	13	Australia	89.41	13	Germany	93.60
14	Portugal	55.02	14	Sweden	88.53	14	Portugal	93.56
15	Hungary	54.96	15	Spain	88.30	15	Canada	93.50
16	Latvia	54.69	16	Finland	87.82	16	Norway	93.33
17	Chile	52.39	17	Slovakia	87.78	17	Argentina	92.75
18	Canada	52.38	18	Greece	86.80	18	India	92.65
19	Norway	52.14	19	Czech Republic	86.62	19	Turkey	92.58
20	Lithuania	51.57	20	Lithuania	85.50	20	Russia	92.57
21	France	50.00	21	Hungary	84.67	21	United States	92.39
22	New Zealand	49.99	22	Italy	84.22	22	Greece	92.31
23	Germany	49.09	23	United States	84.07	23	Hungary	91.82
24	Bulgaria	48.55	24	Poland	83.51	24	Ireland	91.76
25	Slovenia	48.33	25	Luxembourg	83.19	25	Australia	91.43
26	Israel	47.29	26	Israel	81.55	26	South Korea	91.36
27	Spain	46.90	27	Estonia	76.82	27	Romania	90.43
28	Romania	46.30	28	New Zealand	76.76	28	Poland	89.58
29	Australia	46.03	29	Slovenia	73.81	29	Chile	88.85
30	United States	43.89	30	Latvia	73.53	30	Japan	88.83
31	Italy	43.78	31	Bulgaria	73.33	31	South Africa	87.65
32	Greece	43.63	32	Japan	71.79	32	Indonesia	87.21
33	Poland	43.56	33	Romania	70.06	33	Czech Republic	86.87
34	Japan	43.08	34	Turkey	68.90	34	Nigeria	85.41
35	Mexico	34.69	35	Russia	67.03	35	China	85.16
36	South Africa	33.77	36	South Korea	54.81	36	Bulgaria	84.31
37	South Korea	32.37	37	Indonesia	54.37	37	Slovakia	82.98
38	Turkey	27.51	38	China	54.36	38	Slovenia	81.67
39	Indonesia	26.82	39	Argentina	52.22	39	New Zealand	81.31
40	Nigeria	24.61	40	Chile	51.63	40	Mexico	80.07
41	China	24.21	41	Mexico	49.94	41	Estonia	76.82
42	Russia	20.00	42	South Africa	47.44	42	Lithuania	74.47
43	Brazil	19.79	43	Brazil	43.14	43	Luxembourg	65.82
44	Argentina	13.66	44	Nigeria	38.65	44	Latvia	64.37
45	India	12.27	45	India	27.17	45	Israel	61.18

Source: Prognos 2020

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## Brief methodology overview

The core of the study is a detailed analysis of the interrelations between globalization and economic growth dynamics. The economic changes caused by globalization since 1990 are quantified based on this. The following section presents an overview of the procedure. A detailed description of the methodology can be found in Chapter 5 of the annex to the study.

The “globalization champion” is determined in three steps:

1. Creation of the globalization index
2. Investigation of the interdependences between globalization and economic development
3. Determination of the “globalization champion”

The economic impact of globalization can only be quantified if this complex process is made measurable. In a first step, this is based on a comprehensive globalization index. It contains differentiated indicators that reflect the economic and the political and social aspects of globalization alike. Indicators are chosen closely based on the KOF Index of Globalization of the Eidgenössische Technische Hochschule Zürich.

The causative links between globalization and economic development are identified in the second step, quantifying the growth effect of globalization with the help of regression analyses. Economic development is the variable to be explained in the regressions. It is operationalized by the growth of the gross domestic product per capita in percent.

The political sub-index, like the overall ranking, only has European countries at the top. They are already closely politically integrated simply due to their membership in the European Union. However, two large countries lead the list with Italy and France, in contrast to the overall index. Brazil, an emerging market, has also made the top ten. In contrast to economic or social globalization, where smaller countries tend to be a lot more internationally integrated, simply due to their small size, larger countries are not at the same disadvantage in political globalization: Large and small – as well as less prosperous – countries have the same opportunities to integrate with the rest of the world on a political level.

The globalization index previously created forms the central explanatory variable. The regression results show whether there is a statistically significant correlation with economic development and how pronounced it is. The semi-elasticity of economic growth per capita in relation to globalization is used subsequently to quantify the globalization-induced growth gains of the individual countries. The “globalization champion” is determined based on this.

Globalization-induced growth gains are quantified in two sub-steps. The first step is to calculate the growth rates each country would have seen if globalization had stagnated. For this purpose, the annual changes in the globalization index are multiplied by the estimate of the amount of the globalization effect on gross domestic product and subtracted from the historical values of the growth rates.

This leads to a counterfactual growth path for each country (based on the gross domestic product at the beginning of the period under observation, and applying the recalculated growth rates). This reflects the economic development if globalization had stagnated, without involving any other feedback effects.

Comparison of the historical development of the gross domestic product with the counterfactual growth path reflects the globalization-induced growth gains and losses of the individual countries. Finally, the country that was able to achieve the greatest gains in gross domestic product per capita as a result of globalization in total across the period from 1990 to 2018 is named “globalization champion”.

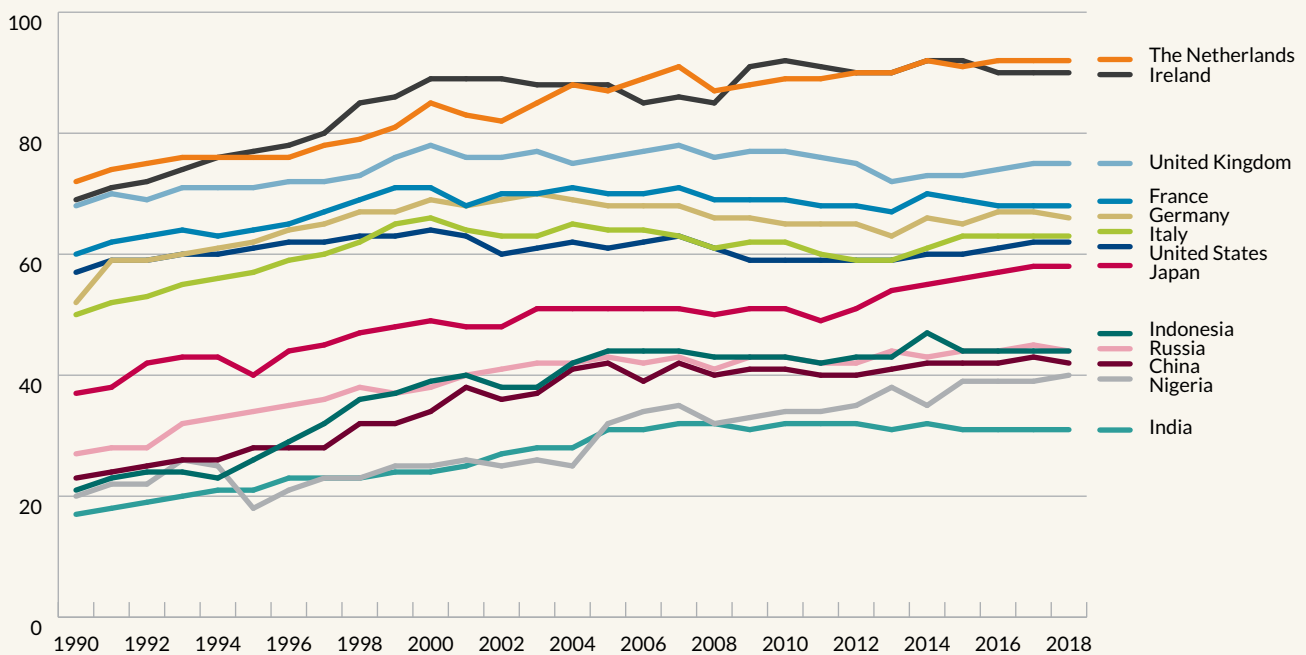
Country-specific differences are also responsible for some indicators of the ranking of a country in the globalization index or in the individual sub-indices. This includes geographical features or the country-specific significance of individual industries, for example. The Netherlands and Belgium, are two countries that owe their above-average degree of openness to the supraregional relevance of their seaports of Rotterdam and Antwerp. Ireland and Luxembourg occupy leading positions in international capital movements due to their status as financial centers.

Viewed across the entire period analyzed, global integration has increased significantly (Figure 1). For example, the median of the globalization index across all 45 countries under consideration was at 42 in 1990, while the current median is at 63 points. The dynamics of globalization were particularly high in the 1990s. It peaked in the early 2000s. Integration of the once-socialist countries of the former Eastern Bloc and China into the global economy (characterized by market economy) was a particular indicator of this dynamic. The degree of globalization has hardly changed anymore since it reached its highest level so far before the global economic and financial crisis in 2007, at a good 64 points.

index points apart at the beginning of the decade. This difference has shrunk to only 12 index points. In contrast to any of the other highly developed economies, Japan is characterized by continuous increase of points even towards the end of the period under review. It started on a very low level when compared to economically similar countries. The globalization index developed most dynamically in emerging markets such as Indonesia, Russia, China, and Nigeria. These countries' degree of integration remained very low at the beginning of the period under review. They accordingly have great potential to catch up, as well as the greatest potential to increase their degree of globalization.

Also note that the ranking of countries within the index has remained virtually the same across the entire period: The countries that started out with a comparatively high degree of international integration in 1990 are still highly globalized. Throughout the analysis period, the list has been led by smaller, highly developed economies from Europe. Larger European countries follow in the upper midfield. The gap in this group has reduced in recent years. For example, the United Kingdom and Italy were still 18

FIGURE 1 Globalization over time  
Characteristics of the globalization index for selected countries



Source: Prognos 2020

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## 2.2 Connection between globalization and growth

The influence of globalization on economic development in the countries analyzed is determined using an econometric examination. Regression analysis reflects a stable and significantly positive correlation between an increasing degree of globalization, as measured by the globalization index, and the growth of gross domestic product per capita in the economies observed.

Regression analysis is designed to allow isolation of the influence of the degree of globalization from the effects of other factors influencing economic development. Economic development, as the variable to be explained, is represented by the gross domestic product per capita. The main results of the regression analysis are presented in column 2 of Table 3. The central explanatory variable of economic development is the globalization index and its sub-indices of economic, social, and political globalization, in the third column. Other explanatory factors for economic development are the level of economic performance, investment ratio, birth rate, and a crisis indicator for the recession of 2008 and 2009.

As a result, the regression analysis reflects a significant positive influence of globalization on growth of the gross domestic product per capita. The estimated coefficient of 0.34 for the globalization index can be interpreted as reflecting semi-elasticity. It shows that a one-point increase in the globalization index corresponds to an average increase of 0.34 percentage points in per capita GDP growth. The relevance of this estimated semi-elasticity can be illustrated using an example: The globalization index for Germany grew by 0.84 points per year on average between 1990 and 2018. Accordingly, an annual average of  $0.34 \cdot 0.84 = 0.29$  percentage points of economic growth per capita in Germany can be attributed to its continuing integration with the rest of the world. At an average annual growth rate per capita of just under 1.4 percent, globalization plays an important role in Germany.

Other explanatory factors of the economic development in the base specification reflect the expected directions as well. The (past) gross domestic product per capita, the birth rate, and the indicator for the global recession of 2008/2009 have negative values. These results are statistically significant. The coefficient of (past) economic output of  $-7.86$  means that an increase in gross domestic product per

capita by 1 percent leads to a reduction in per capita growth of 0.0786 percentage points two years later. From the perspective of convergence theory, this negative correlation is due to the long-term adjustment of living conditions in the various economies. Concerning fertility, an increase of 1 percent corresponds to a 0.061 percentage point reduction in per capita growth. The estimated coefficient of  $-3.76$  for the global recession in 2008/2009 means that economic growth per capita was on average 3.76 percentage points lower during that period across all countries than during the rest of the period under examination. The estimated value for investment in relation to gross domestic product, at a value of 0.07, also reflects the expected direction although the coefficient in the estimate in column 2 is not significant.

The influence of increasing globalization on per capita growth can be determined separately for all three components of the globalization index – economy, social, and political. Each of the three components contributes about one third of the positive overall effect. It must be noted that economic globalization is included in the overall index with a weighting of 60 percent. Only this is why it makes up one third of the total effect. With balanced components, economic globalization would be less relevant than political and social globalization. An increase in the sub-indices of economic, social, and political globalization by one index point corresponds to an increase in the growth rate of economic output per capita by 0.09, 0.17, and 0.15 percentage points respectively. This clearly shows that focus should not be limited to the economic aspect of globalization. Growing global integration in the areas of society and politics also promotes growth. For example, greater social globalization can strengthen the global flow of information by way of closer personal contacts. The transfer of knowledge and exchange of know-how tends to promote productivity, and as a result economic growth.<sup>3</sup>

<sup>3</sup> Section 2.4 briefly deals with potential consequences of the current COVID-19 pandemic for economic performance of individual countries, depending on the extent of part of economic globalization.

TABLE 3 Regression results on the influence of globalization on economic growth per capita

Dependent variable: Growth of gross domestic product per capita in %	IV method with FE	IV method with FE and sub-indices
Total globalization	0.34*** (0.07)	0.34*** (0.07)
· Economic globalization		0.09*** (0.02)
· Social globalization		0.17*** (0.04)
· Political globalization		0.15** (0.06)
Gross domestic product per capita of the penultimate period (logarithmic)	-7.86*** (1.42)	-10.4*** (1.52)
Birth rate (logarithmic)	-6.12*** (1.82)	-3.02* (1.57)
Investments (in % of gross domestic product)	0.07 (0.06)	0.32*** (0.08)
Crisis indicator 2008–2009	-3.76*** (0.46)	-4.36*** (0.5)
Number of observations	1,215	1,215
R <sup>2</sup> (centered)	0.365	0.426

Notes: The symbols \*, \*\*, \*\*\* indicate the significance of the estimation results for the 10 %, 5 % and 1 % levels. Standard errors clustered by country are shown bracketed. All regressions contain a constant factor. FE is an abbreviation for country-specific fixed effects. IV=Instrumental variables estimation.

Source: Prognos 2020

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Robustness of the estimate is verified by comparing the base specification to the results of alternative specifications. The alternatives are examined with different combinations of explanatory variables, starting from the basic specification. The results of these regressions confirm the assumption that both the estimated growth effects of globalization and those of the other explanatory variables can be considered robust, and therefore reliable (Tables 16 and 17 in the annex).

### 2.3 Growth effects of globalization

The regression analysis results are used to determine the benefits of each of the 45 countries from an increasing degree of globalization between 1990 and 2018. A counterfactual scenario is developed for this. It reflects the income gains without the influence of globalization. The counterfactual scenario is based on the assumption that globalization has remained at the 1990 level over the period under observation. Hypothetical behavioral adjustments are not included in this counterfactual status. Development of GDP per capita for the counterfactual scenario is calculated with the following formula:

$$\frac{BIP_t}{POP_t} = \frac{BIP_{1990}}{POP_{1990}} \cdot \prod_{k=1991}^t \left( 1 + \frac{g_k - 0.34 \cdot (GI_k - GI_{k-1})}{100} \right)$$

$g_k$  corresponds to the historically present growth rate of the gross domestic product in percent,  $POP_t$  to the population in year  $t$  and  $GI_k$  to the value of the globalization index in year  $t$ . The gross domestic product as such is then determined by multiplying the gross domestic product per capita by the historical population figures. The data on the gross domestic product are available in real figures, i.e. price-adjusted.

The difference between actual development of the gross domestic product per capita and the corresponding development without progress in globalization in the counterfactual scenario shows the degree of economic output per capita that would have resulted without any increase of global integration. The differences between the actual and counterfactual developments are aggregated across the entire period under consideration. This aggregate, the cumulative globalization-induced income gains, forms the central figure for measuring the globalization gains of individual countries. The

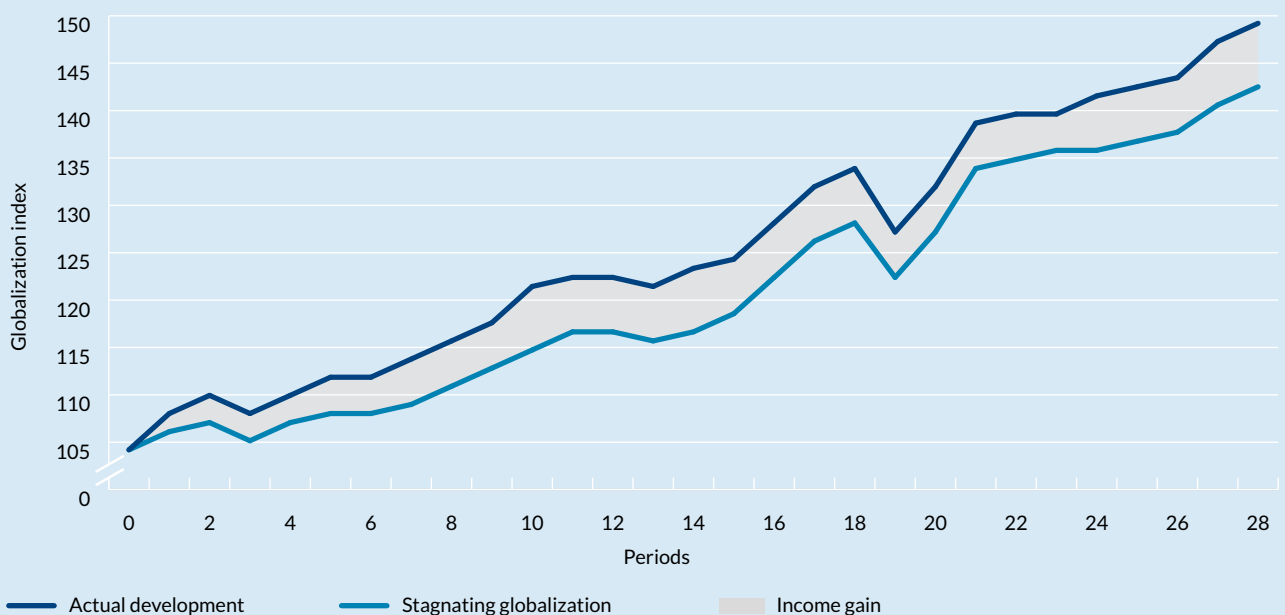
### Interpretation of globalization-induced income gains as an indicator for determining the “globalization champion”

The counterfactual assumption of stagnation of globalization leads to lower economic growth, and as a result to a flatter growth curve, at least for countries where the globalization index rose between 1990 and 2018. The difference between the gross domestic product per capita for any given year

according to this alternative path and the actual trend indicates the absolute economic gains from globalization (Table 4).

“Cumulative income gain induced by progressive globalization”, the value used for this study, is derived as an aggregate of the annual difference between actual and counterfactual GDP per capita. This income gain must be distinguished, e.g. from values used in national accounts, such as disposable income.

FIGURE 2 Schematic representation of the development of the gross domestic product and globalization-induced income gains



Source: Prognos 2020

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“globalization champion” is the economy where residents have achieved the highest income growth through globalization.

Additional rankings consider the different economic situations of individuals in different countries (Section 2.3.1) and the different starting levels and sizes (Section 2.3.2).

### 2.3.1 Determining the “globalization champion” based on per capita income gains

Japan is the “globalization champion” in 2020, ahead of Ireland and Switzerland (Table 4). The average annual per capita income gain due to globalization between 1990 and 2018 in Japan reaches nearly 1,800 euros. Cumulatively, this results in an income gain per capita of about 50,000 euros in the course of 28 years.<sup>4</sup> Finland, Israel, the Netherlands, Germany, Denmark, and, as the first Central Eastern European country, Slovenia follow in the top ten.

Ranks eleven to 22 are essentially held by Western and Central European countries, along with Australia, New Zealand, and Canada. Greece, in eleventh place, has noticeably benefited more greatly from globalization than countries such as Sweden or France could. Most Central Eastern European countries are found within ranks 23 to 35. This is due to the benefits these countries have derived from their opening in the 1990s. The United States, as a large, established economy, only ranks 26th, in the vicinity of Spain and Poland.

The lower ranks are held by emerging markets exclusively. The large emerging markets of China and India, together with the populous countries of Indonesia and Nigeria, are at the bottom of the ranking. The average annual income gain in India was at 24 euros per capita. Nigeria reached 30 euros, Indonesia 64 euros, and China 95 euros. These comparatively low globalization-induced income gains are due to the still-low globalization index in 2018 as well as a low dynamic of this index over time.

The economies with the largest income gains are not necessarily those with the highest globalization index levels. Focusing on the period from 1990 onwards ignores globalization gains generated in previous years. High income gains were generated by those countries that showed a pronounced dynamic of the globalization index in particular in the earlier years since 1990.

<sup>4</sup> For correct assessment of the results, it should be noted that this analysis does not permit any statements on distribution of income within a country. The reported income increases induced by progressing globalization refer exclusively to the population average.

TABLE 4 Absolute income gains per capita due to increasing globalization in the period from 1990 to 2018

Ranking	Country	Average annual per capita income gains from 1990 onwards in euros*	Cumulative per capita income gains from 1990 onwards in euros*
1	Japan	1.787	50.044
2	Ireland	1.609	45.060
3	Switzerland	1.583	44.329
4	Finland	1.344	37.618
5	Israel	1.275	35.711
6	The Netherlands	1.167	32.684
7	Germany	1.112	31.133
8	Denmark	1.071	29.988
9	Slovenia	989	27.685
10	South Korea	969	27.126
11	Greece	894	25.039
12	Austria	870	24.356
13	Portugal	825	23.093
14	Australia	804	22.505
15	Luxembourg	788	22.054
16	Canada	757	21.194
17	Belgium	747	20.930
18	Italy	742	20.769
19	Sweden	699	19.584
20	France	625	17.487
21	United Kingdom	598	16.747
22	New Zealand	551	15.420
23	Hungary	533	14.934
24	Estonia	461	12.915
25	Spain	453	12.685
26	USA	452	12.650
27	Poland	445	12.464
28	Slovakia	442	12.388
29	Chile	422	11.812
30	Lithuania	341	9.546
31	Latvia	340	9.522
32	Czech Republic	291	8.152
33	Norway	287	8.031
34	Turkey	287	8.026
35	Romania	207	5.804
36	South Africa	195	5.456
37	Bulgaria	175	4.901
38	Mexico	173	4.837
39	Brazil	136	3.806
40	Argentina	124	3.465
41	Russia	115	3.213
42	China	95	2.658
43	Indonesia	64	1.783
44	Nigeria	30	836
45	India	24	671

\*real, at 2000 prices; rounded figures

Source: Prognos 2020

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### Comparison of the current results with those of the Globalization Reports 2014, 2016 and 2018

The methodology used to calculate the globalization index and determine globalization-induced income gains was first applied in 2014. They were both updated from 2016 to 2018, with the period under observation was extended by two years each. This study increased the number of countries analyzed as well as the period under observation. Luxembourg, Indonesia, and Nigeria were added.

Both adjustments change the globalization index and slightly adjust the estimation specification for determining the causal relationship between globalization and economic results. However, the results show that the regression analysis is robust to changes in the specification. The regression coefficient of the globalization index was at 0.35 (2014), 0.31 (2016), and 0.33 (2018) in the past. It is currently at 0.34.

The ranking of the globalization winners provides a basic image that is comparable to the predecessor study. While Switzerland was still in the lead in the 2018 ranking, followed by Japan, Finland, and Ireland, this order has changed in the current report. Japan is now ahead, followed by Ireland, Switzerland, and Finland. Such shifts are due changes in the dynamics of globalization in the respective countries, as well as to the adjusted selection of countries, extension of the period under review, and data revisions. Exchange rate fluctuations may also contribute to changing positions in the ranking in individual cases, as is the case with Switzerland.

Greater changes as compared to the Globalization Report 2018 are only found for Sweden, which has fallen from place 14 in 2018 to place 19 at the current time. While Sweden also dropped in the overall index due to a slight decline in economic globalization, the median of all countries considered in the globalization index increased slightly between 2016 and 2018.

### 2.3.2 Globalization-induced income gains per capita in relation to the starting level

The previous section made clear that economies with a low starting level of GDP per capita have benefited less from globalization than public debates on Chinese export strength, Korean strength in globally used information technologies, and their industrial dynamics may suggest.

The ranking of globalization winners changes accordingly when looking at income gains relative to the starting levels of gross domestic product per capita (Table 5). Economies with a low starting level of gross domestic product per capita, a group that includes many Central and Eastern European countries, have benefited tremendously from globalization. For example, the globalization-induced income gain per capita in China has been a good six times greater since 1990 than its economic output per capita was in the starting year.

In light of this, industrialized nations perform on a significantly lower level. “Globalization champion” Japan ranks in the midfield on place 24, just behind Germany. The cumulative globalization-induced income gain in either country amounts to just under 150 percent of the initial level of economic performance per capita. Norway is just ahead of the United States on the last ranks. Both countries, as well as Luxembourg, had a comparatively high gross domestic product level per capita in 1990 and could only generate moderate income gains until 2018. Taken together, these two factors contribute to keeping relative income gains in these countries well below average.

According to this approach, emerging markets such as India, Indonesia, and Nigeria are in the midfield. Although their starting level of economic output per capita was very low in 1990, income gains per capita remained too low to achieve a higher place by 2018. This is also due to economic development being only moderate all in all. China, for example, was able to increase its economic performance per capita by almost 1,000 percent from 1990 to 2018. By contrast, the corresponding growth rate remained just under 300 percent in India, at 150 percent in Indonesia, and at only 60 percent in Nigeria.

TABLE 5 **Income growth per capita due to globalization in the period from 1990 to 2018 in relation to the gross domestic product per capita in 1990**

Ranking	Country	Cumulative income gains per capita in relation to gross domestic product per capita in 1990
1	China	618%
2	South Korea	373%
3	Poland	366%
4	Hungary	352%
5	Chile	339%
6	Slovenia	298%
7	Romania	293%
8	Ireland	292%
9	Bulgaria	270%
10	Indonesia	264%
11	Estonia	256%
12	Portugal	238%
13	Greece	230%
14	Slovakia	225%
15	Latvia	216%
16	Turkey	208%
17	Israel	206%
18	Lithuania	205%
19	India	200%
20	Finland	172%
21	South Africa	162%
22	The Netherlands	151%
23	Germany	142%
24	Japan	133%
25	Czech Republic	132%
26	Nigeria	124%
27	New Zealand	122%
28	Australia	118%
29	Russia	114%
30	Switzerland	114%
31	Austria	113%
32	Denmark	112%
33	Italy	112%
34	Brazil	103%
35	Belgium	101%
36	Spain	100%
37	Canada	97%
38	France	85%
39	Mexico	79%
40	Sweden	73%
41	United Kingdom	68%
42	Luxembourg	59%
43	Argentina	57%
44	USA	40%
45	Norway	26%

Source: Prognos 2020 | BertelsmannStiftung

### 2.3.3 Globalization-induced income gains by country

The above considerations have standardized the income gains to the number of residents. To make countries such as Estonia and India comparable. Disregarding this standardization and comparing the income gains of economies as in general, it is not surprising that populous countries such as Japan, the United States, and China hold the top ranks (Table 6). The average annual income gain of Japan, the “globalization champion” 2020, was at 228 billion euros. Totaled up over the period from 1990 to 2018, its income gain amounts to almost 6.5 trillion euros. For comparison, Japan’s real gross domestic product was around 5.5 trillion euros in 2018. Germany as a whole has also benefited considerably. An average annual income gain of 85 billion euros adds up to almost 2.5 trillion euros for the period 1990 to 2018. This means that Germany has gained an amount roughly corresponding to the gross domestic product in 2018 as a result of increasing globalization over the past 28 years. The last ranks are held by the three Baltic States and Luxembourg – all of which have comparatively small populations.

What stands out is that the populous emerging markets of Nigeria, with just under 200 million residents, and India, with about 1.3 billion residents, have generated income gains that only put them in the lower midfield in 2018. China, with its roughly 1.3 billion residents, and Indonesia, with a population of about 270 million in 2018, were able to profit much better from globalization by comparison.

Large industrialized nations are among the main winners in terms of globalization-induced income gains at the country level. Central Eastern European countries in particular showed comparatively moderate, income gains at country level. This is also connected to the calculation method. First of all, countries such as Luxembourg or Norway had already reached a comparatively high level of globalization in 1990. They had only limited space for further income gains. Secondly, calculation of cumulative, globalization-induced income gains depends on whether substantial income gains were generated in the early phase of the 1990s, or only later in the new millennium. Central Eastern Europe or China in particular only started opening up to the world market at later times. China is an exception in that it has achieved enormous income gains in spite of such calculation-related

TABLE 6 Average and cumulative income gains from globalization at country level in the period from 1990 to 2018

Ranking	Country	Average annual income gains since 1990 in billion euros*	Cumulative income gains since 1990 in billion euros*
1	Japan	228	6,394
2	USA	149	4,171
3	China	128	3,584
4	Germany	85	2,368
5	Canada	76	2,141
6	United Kingdom	62	1,732
7	Mexico	54	1,501
8	South Korea	48	1,337
9	Italy	44	1,232
10	France	36	1,018
11	Brazil	29	810
12	The Netherlands	24	672
13	Turkey	20	564
14	Russia	19	528
15	Spain	19	525
16	Poland	17	477
17	Australia	17	475
18	Indonesia	15	428
19	Switzerland	12	346
20	Greece	10	273
21	Sweden	9	266
22	South Africa	9	259
23	Portugal	9	240
24	Belgium	8	234
25	Israel	8	226
26	Austria	8	226
27	Finland	8	216
28	Argentina	7	186
29	Ireland	7	186
30	Chile	7	184
31	Denmark	6	171
32	India	6	162
33	Hungary	6	157
34	Nigeria	5	136
35	Romania	4	117
36	Czech Republic	3	90
37	New Zealand	3	72
38	Slovakia	3	70
39	Slovenia	2	57
40	Norway	1	41
41	Bulgaria	1	40
42	Lithuania	1	30
43	Estonia	1	19
44	Latvia	1	18
45	Luxembourg	0	10

\*real, at 2000 prices, rounded figures

Source: Prognos 2020

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disadvantages. This is due not only to a dynamic increase of its globalization index, but also to considerable growth rates of the gross domestic product per capita, which are unique at least for the period and countries under consideration.

## 2.4 Globalization and sustainability

The above sections make the phenomenon of “globalization” more concrete. They use the globalization index to quantify income gains generated by globalization. The world has drawn more closely together since 1990. Integration of flows of goods, people, and capital has increased significantly since then. However, the globalization index does not make any statement about the extent to which increasing globalization has benefited or harmed certain social groups or the environment in the past.

TABLE 7 Indicators used for the sustainability indices\*

Ecological sustainability	Social sustainability
CO2 emissions (kg per gross domestic product (US-\$ in 2010 prices))	Adolescent fertility rate (births per 1,000 women aged 15 to 19)
CO2 emissions (tons per capita)	Mortality rate for newborns (per 1,000 live births)
PM2.5 Air pollution (micrograms per cubic meter, annual average)	Mortality rate for children less than 5 years old (per 1,000 live births)
Renewable energy consumption (% of final energy consumption)	Vaccinations against measles (% of children aged 12 to 23 months)
Red List Index of species survival (index values from 0–1)	Student-teacher ratio in primary school
Annual fresh-water withdrawals (in % of annually regenerated fresh water)	Internet use (% of the population)
	Unemployment (% of the labor force)
	Women in the national parliament (percentage of seats)

\* All data from the World Bank (World Bank, 2018) except the Red List Index of species survival: UN calculations based on data from BirdLife International and International Union for Conservation of Nature (IUCN) (2020) on the extinction risk of various species. For details on meta data: Bubb et al (2009).

Source: Prognos 2020

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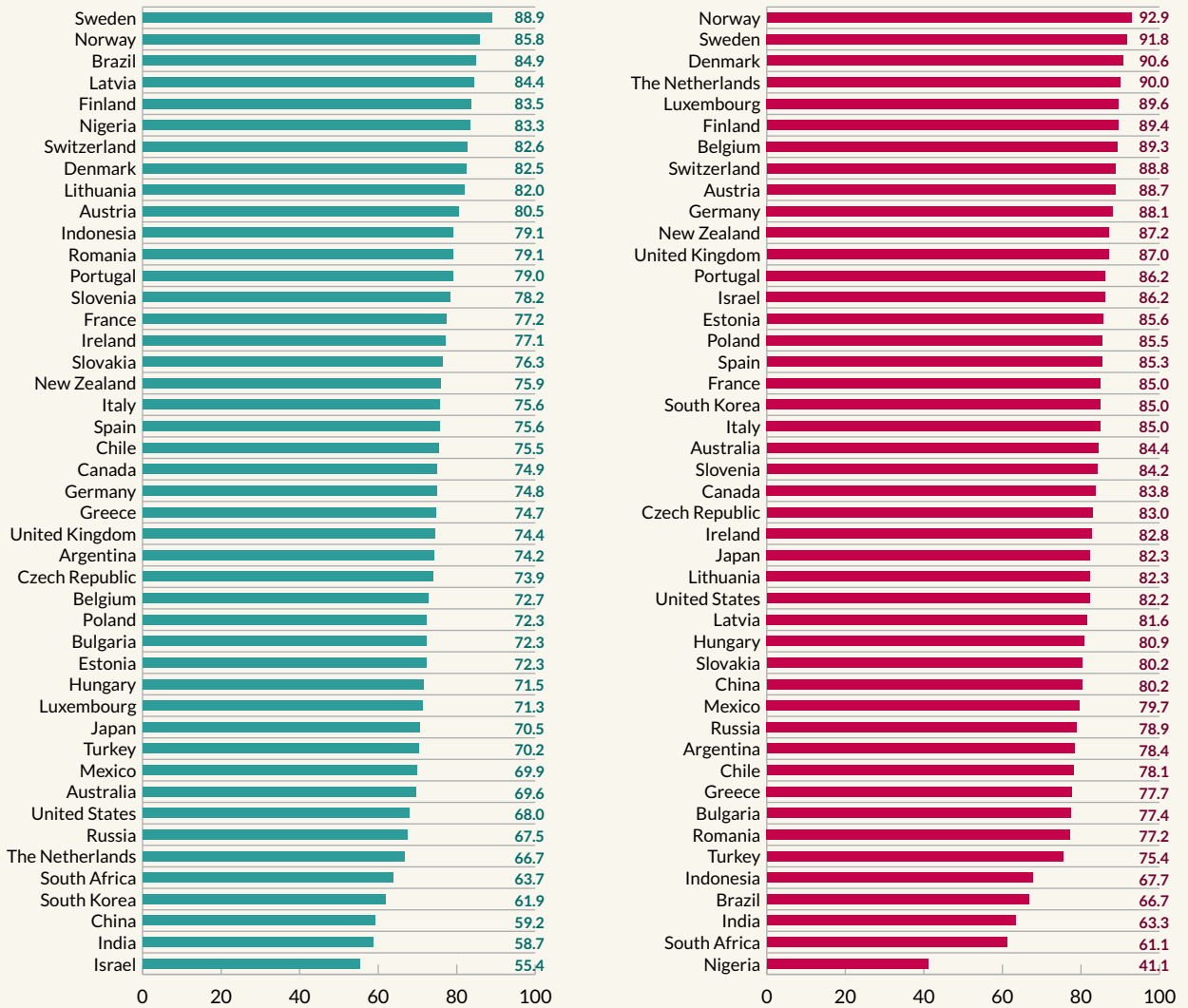
Indices of social and environmental sustainability are formed in order to descriptively examine the relationship between globalization and social and environmental sustainability on a macroeconomic level. These indices combine various indicators for the most comprehensive image of social and environmental sustainability in the countries analyzed (Table 7). The indicators used are based on the Sustainable Development Report 2019<sup>5</sup>, published by the Bertelsmann Stiftung.

The report describes progress towards achieving the United Nations Sustainable Development Goals (SDG). The SDG indices do not map any indices of environmental or social sustainability. Instead, indices are formed for groups such as “Peace, Justice and Strong Institutions” or “Life Below Water”. As a result of this, indicators of environmental and social sustainability considered in the Sustainable Development Report need to be collected and re-aggregated to combine the various relevant aspects of environmental and social sustainability. For this,

5 Sachs, J./Schmidt-Traub, G./Kroll, C./Lafortune, G./Fuller, G. (2019): Sustainable Development Report 2019. New York: Bertelsmann Stiftung and Sustainable Development Solutions Network (SDSN).

- all indicators were reviewed for relevance for the sustainability indices and for data availability, and

FIGURE 3 Sustainability indices 2018 – Environmental (left) and social (right) sustainability indices



Source: Prognos 2020

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## On the placements of Brazil and Israel in the environmental sustainability index

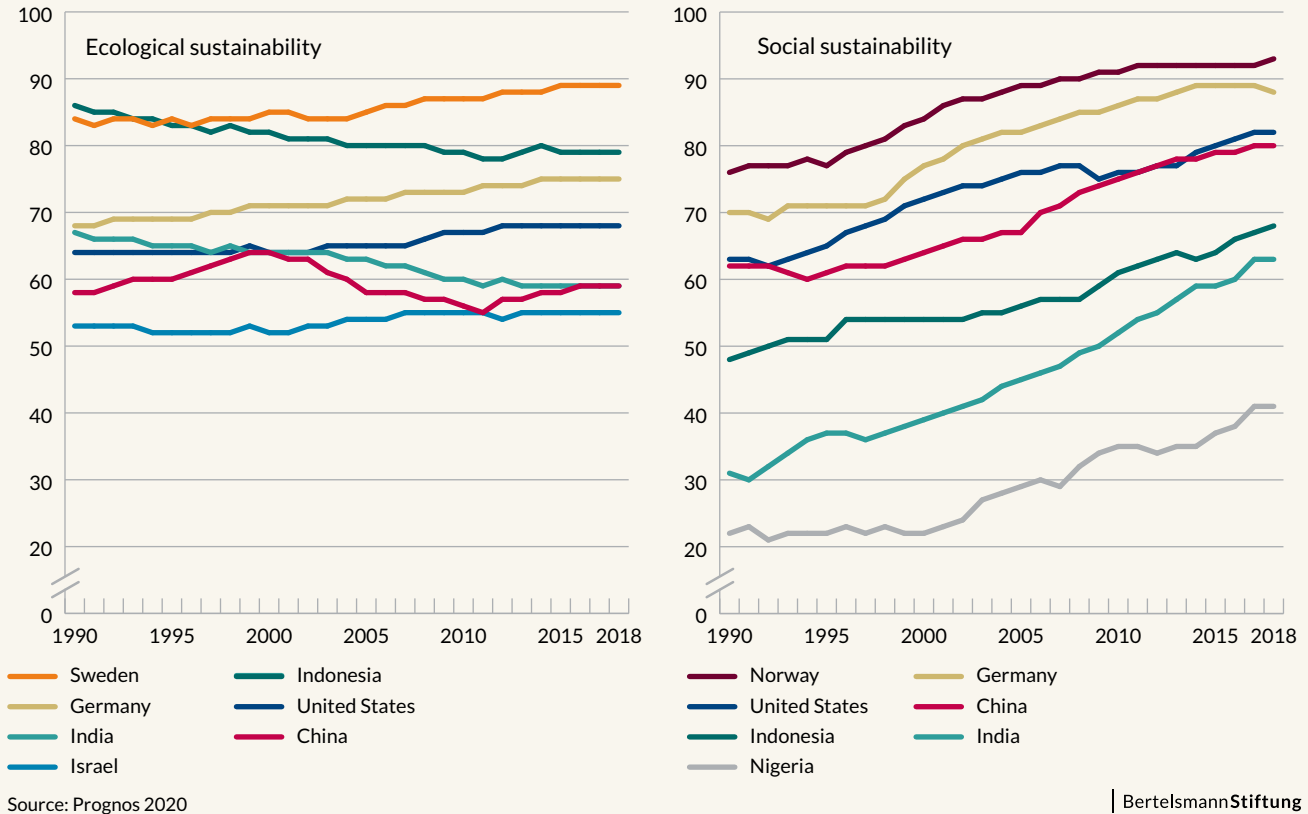
Brazil's good performance in the environmental sustainability index (3rd place for 2018) and Israel's poor results (45th place for 2018) stand out particularly. Both reasons can be found in specific data peculiarities.

1. Brazil's good index score is due to the fact that the country consumes little water, emits little CO<sub>2</sub> per capita and has a high proportion of renewable energies in its electricity mix. Clearing of its rainforest is ecologically problematic. No other country clears more forest permanently. Indonesia, as the country with the second-highest deforestation, only reached a value of 60 percent of Brazil's permanent clearings in 2018. The issue here is that the indicator of forest clearance before the year 2000 cannot be mapped at all, and the one from 2000 onwards can only be mapped rudimentarily. Because of this, this indicator could not
2. Israel's poor index score is due to the fact that the country has a relatively low Red List Index score, produces little energy from renewable sources, and is subject to relatively high levels of air pollution. However, the index is significantly influenced by the fact that Israel uses a large amount of fresh water in proportion to its available resources. The issue with this indicator for freshwater abstraction is that it does not adequately reflect water reuse and extraction of water from seawater desalination plants. Since Israel obtains a significant portion of its water demand from such sources, the index puts Israel worse than it would be if water consumption had been presented correctly.

- indicators covering the broadest possible range of social or environmental sustainability were chosen from the resulting list.

Not all indicators in Figure 3 offer values for all countries and all years. Missing data were therefore imputed, using the methodology for construction of the globalization index. Each indicator was assigned a normative rating in the index creation process. For example, a lower mortality rate for newborns is interpreted as favorable, while a low value in the Red List Index of species survival is interpreted as unfavorable. This created a sub-index for each indicator in order to compare the individual indicators. These sub-indices then served as the basis for an overall index of environmental and social sustainability (Figure 3).

**FIGURE 4 Changes in sustainability indices**  
*Changes to environmental (left) and social (right) sustainability in selected countries*

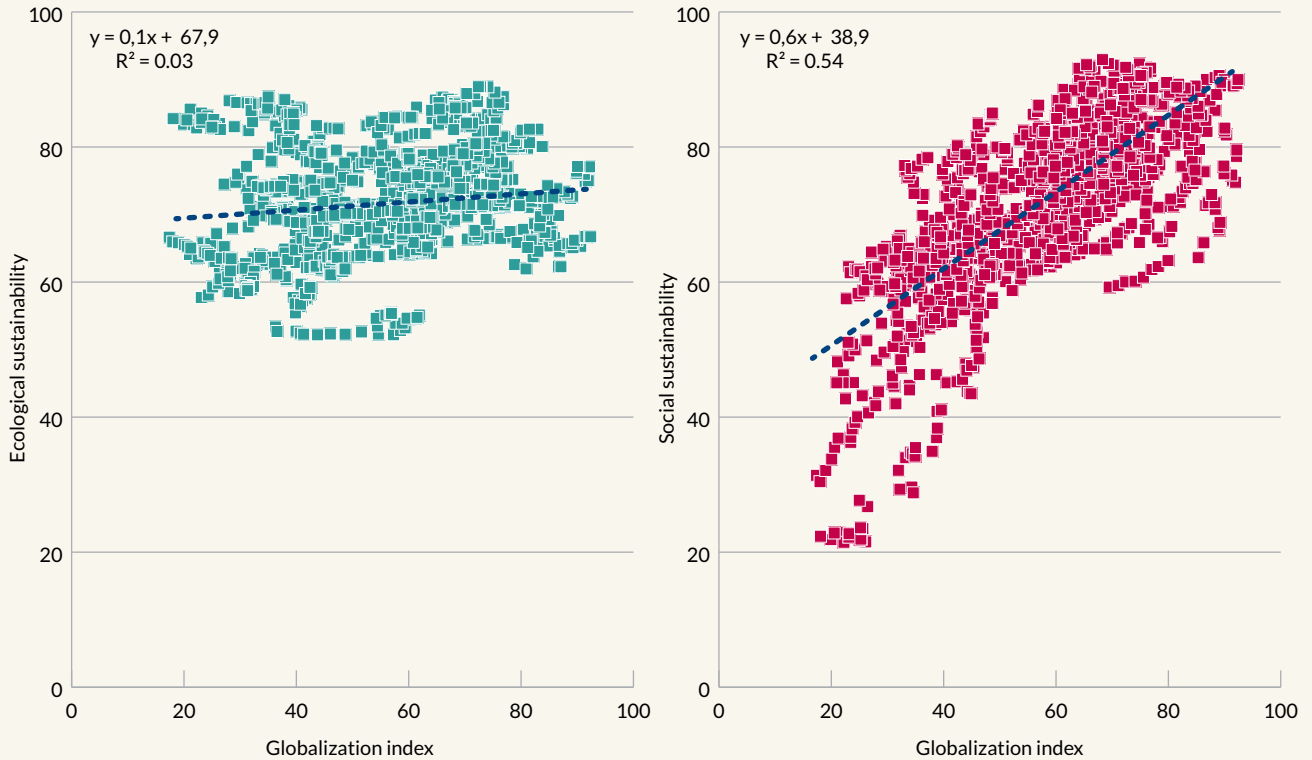


From 1990 to 2018, the average environmental sustainability index of all countries considered rose slightly from 70.9 to 74.4. The environmental sustainability index in most industrialized economies has grown moderately since 1990. In Germany, for example, it increased by 6.5 index points, in the United States by four index points (Figure 4, left-hand side). The greatest growth could be found in the Central Eastern European economies of Romania, Estonia, Lithuania, and Bulgaria. The corresponding index values increased by 11.6 to 15.6 points. Most emerging markets, however, have seen declining or stagnating index over the last two decades. Since 1990, the index value has dropped most sharply in India, South Korea, and Indonesia, by values of 3.9 to 7.9 points.

In contrast, the social sustainability index has increased significantly in all economies analyzed, rising by an average of 19.5 index points. The strongest increase was found in the emerging markets of India, Mexico, Turkey, and Nigeria, with gains between 19 and 32 index points. In contrast, the index increase remained below average in Sweden, Switzerland, and Finland. All of these countries already had high index scores for social sustainability in 1990.

FIGURE 5 Correlation between sustainability and globalization

Correlation between the globalization index and environmental (left) and social (right) sustainability



Source: Prognos 2020

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Countries on a higher level of the globalization index do not show a significantly higher level of the index of environmental sustainability. Beyond this, there is no evidence that strong globalization dynamics are associated with a strong increase of environmental sustainability (Figure 5, left-hand side). This may be interpreted as showing that globalization-induced income gains are not used to improve environmental sustainability.

However, countries with a higher globalization index level show significantly higher levels in the social sustainability index (Figure 5, right-hand side). However, this connection does not appear to be causal. A higher dynamic in globalization does not coincide with a higher growth rate in the social sustainability index.

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## 3 Excursus: dependence on foreign trade

The world has been under the influence of the COVID-19 pandemic since the beginning of this year. In addition to the social and societal consequences, the pandemic may also form the starting point for a structural change in the current extent of globalization. The pandemic generally has the potential to change globalization. A process of rethinking is currently underway. As a result, companies may focus more strongly on the resilience of their value chains, which could, for example, reinforce a trend towards greater regionalization of value-added processes. The COVID-19 pandemic is likely to impact the extent of globalization, although it is not yet possible to predict how pronounced, or how sustainable, this effect will be.

An external trade dependency index is calculated in order to highlight the potential impact of the current pandemic on countries by way of a substantial, lasting, and potentially structure-changing influence of the current pandemic on globalization. This index focuses on the international division of labor, a key aspect of globalization. It reflects the extent to which an economy depends on supply and demand from abroad.<sup>6</sup>

Three channels through which domestic economies are influenced are considered for this.

- The first channel considers a country's export of value added. This shows which part of domestic value added is part of foreign demand.
- The second channel considers domestic demand for value added from abroad. This channel reflects the share of intermediate consumption required for production purposes on the domestic market and the value creation coming from abroad as part of this.

- The third channel considers the share of foreign imports that go directly into domestic consumption, across all products consumed domestically.

The respective index values of the countries are formed based on the results of these three channels and aggregated into a dependency index. A low value in the dependency index implies that a dampening of globalization will have a lower impact on domestic value creation, domestic production processes, and domestic consumer demand since dependency on foreign countries is low. Countries with a higher index score are more, and countries with smaller index scores are less dependent on foreign countries.

<sup>6</sup> In terms of methodology, we are aligned with a scientifically established procedure described, for example, in Timmer et al. (2015).



## Value added versus exports and imports

The focus for development of the dependency index is on domestically generated value added that is used in foreign final demand production (production of goods and services for consumption and investment at home and abroad) and on value added generated abroad that is used in domestic final demand production. The export and import ratios, typical indicators of foreign trade dependency, only reflect distorted dependencies on foreign countries. For example, the export ratio, i.e. the share of exports in the gross domestic product, of the United States was at 14 percent according to World Bank data in 2014, while its import ratio was at around 16 percent.\* In 2014, the share of value added generated in the United States and flowing into foreign final demand was at 10 percent, while the share of imported value added in the total value added used in production for final demand in the United

\* Indicators of value added interdependence are based on data from the World Input-Output Database (WIOD), a multi-regional input-output database. The latest available data point refers to the year of 2014. IO tables are generally published with a considerable delay. More recent data were not available at the time of the calculation. However, evaluations show that structural changes can only be observed across several years. It can, therefore, be assumed that the calculations for 2014 have not changed fundamentally yet.

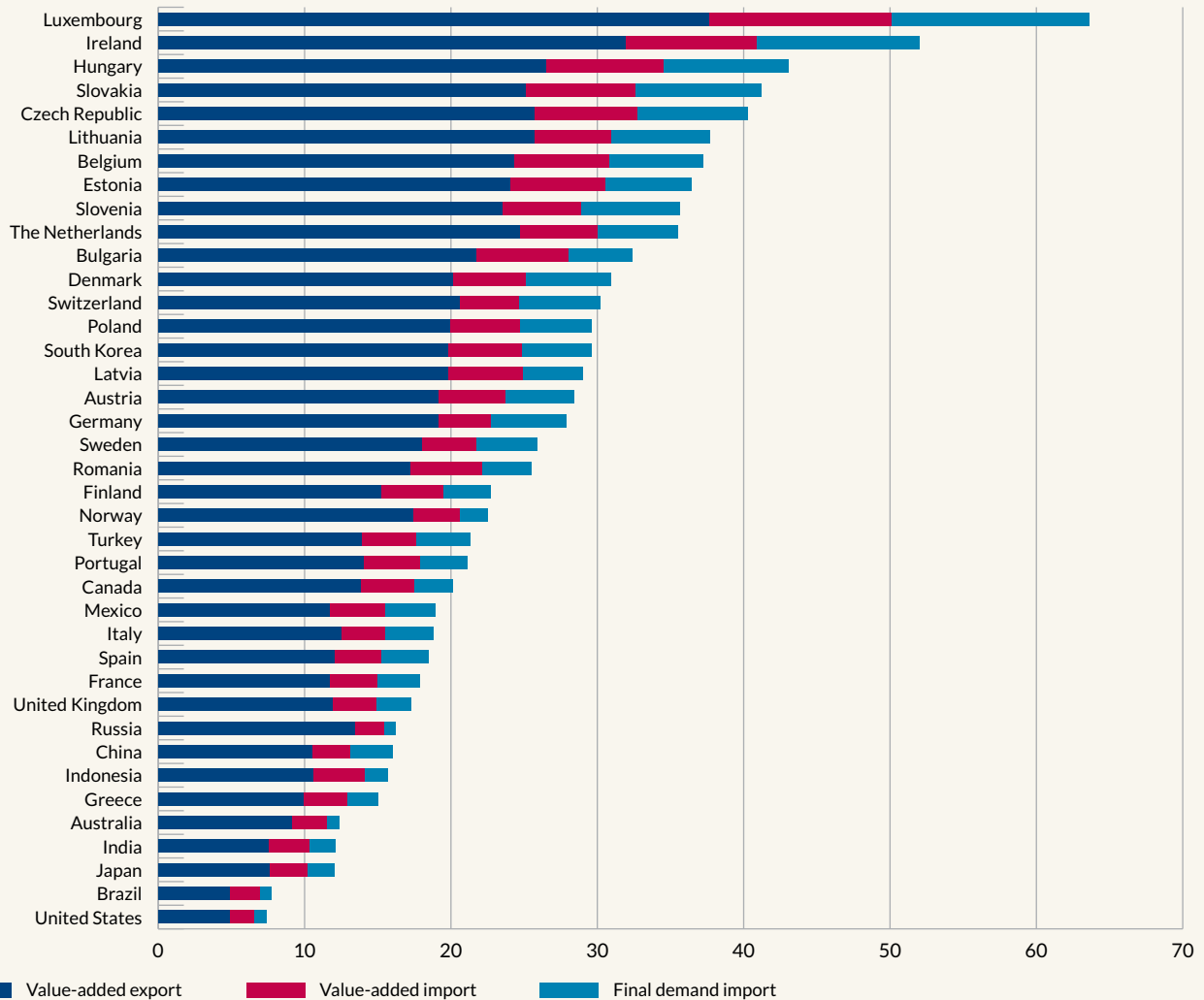
States was only at about 6 percent. This discrepancy is even more pronounced for Germany, where the export ratio was at 46 percent, and the import ratio at 39 percent, in 2014. In contrast, the share of exported value added in the domestically generated value added was at 38 percent, while the share of imported value added in the production for domestic final demand was only at about 14 percent.

On the one hand, these differences are due to different reference values (the gross domestic product for the export and import ratios, the domestic value added as well as production for domestic final demand for the value added). On the other hand, differences occur since the export and import ratios are only rough approximations of the relevance of foreign countries for domestic economic performance. Although every export comprises value added from different countries and industries, it is incorrectly assigned entirely to the exporting country. Re-imports mean that exports are counted twice.

Accordingly, a country ranking of foreign dependency based on exports and imports would not be fundamentally different. There would, however, be some substantial differences in the ranking.

The greatest dependence on foreign countries is found in Luxembourg with an index value of just under 60 points, followed closely by Ireland and Belgium as well as the Central Eastern European countries Hungary, Slovakia, the Czech Republic, Lithuania, Estonia, and Slovenia. The United States and Brazil show the least dependence. This does not mean, however, that the United States or Brazil would be least affected in the event of a global shock (such as the current COVID-19 pandemic). Merely the scope at which such a shock is transmitted via external economic links is relatively small. This includes abstraction of the domestic economic perspective.

FIGURE 6 **Dependence index for 2014** – Dependence index for 2014, broken down into the components of value added export, value added import, and final demand import



Source: Prognos 2020

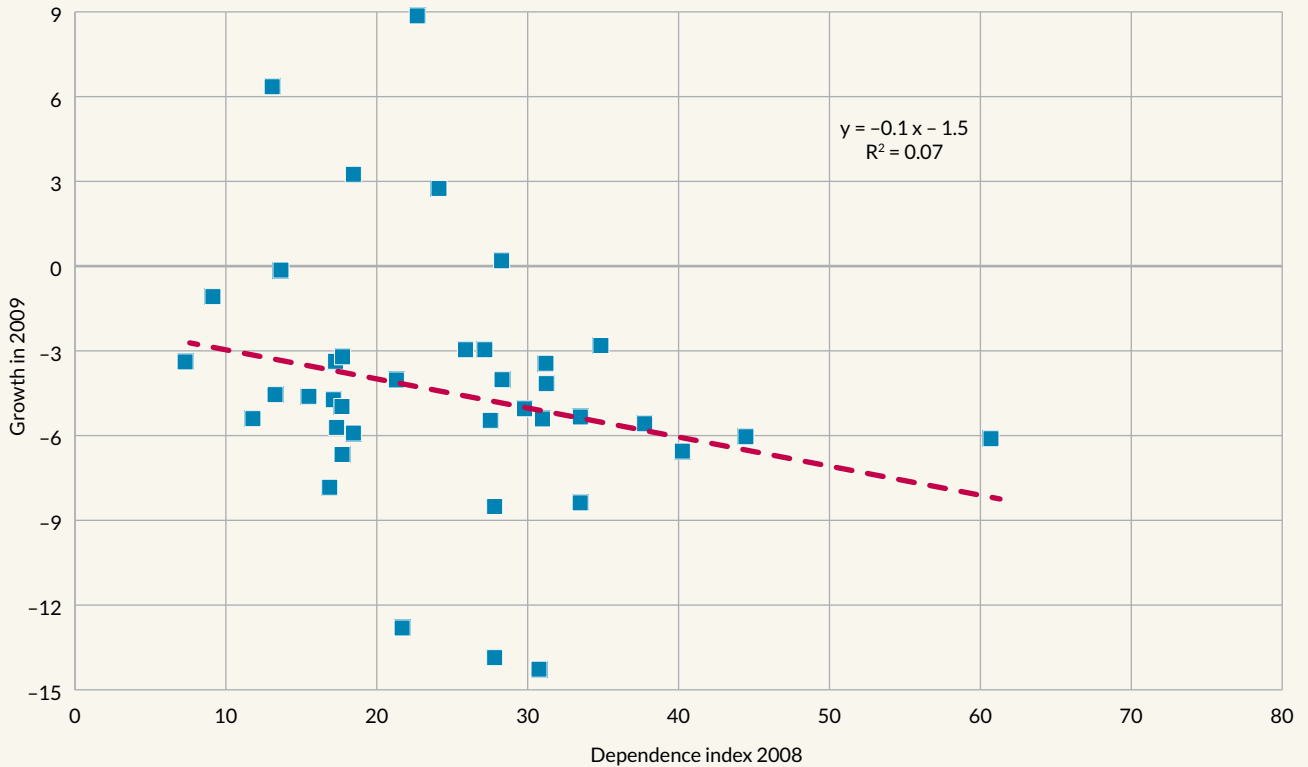
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The effects that a high dependence on foreign trade has on an economy’s growth became apparent in the global economic crisis of 2008/2009. Like the COVID-19 pandemic today, it acted as an external shock to the economy. Although the two shocks differ in origin and effect, there are some parallels between them. They both led to an abrupt cessation of growth. The presentation of a correlation between growth and the dependency index for 2008/2009 permits statements on how a country is affected by its dependence on foreign trade in times of crisis. A negative correlation can be assumed. This means that the reduction of its economic output in the event of a crisis will be greater

the more closely a country is integrated into the system of international division of labor (i.e. the higher it ranks in the dependency index).

Indeed, there is a negative correlation between the economic growth of an economy in 2009 and its dependency index in 2008 (Figure 7). Countries more dependent on foreign trade also tended to be more severely affected by the economic crisis.

FIGURE 7 **Correlation between foreign dependency and growth during the crisis**  
*Correlation between the 2008 dependency index and 2009 growth*



Source: Prognos 2020

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While it must be noted that other aspects such as domestic demand, economic stimulus packages, economic structure, regional relations, etc. also play a major role in determining a country's resilience to global shock, the effects of the global crisis from back then can at least descriptively be transferred to the current situation. Accordingly, the economic collapse may be more pronounced in such countries that show a high value in the dependency index in Figure 6. A quantitative review of this consideration cannot be performed before data on economic growth in 2020 are available – for example in the scope of the next Globalization Report.

## How strongly does the coronavirus pandemic dampen the globalization-induced income gains in Germany?

The coronavirus pandemic will have consequences on the extent of international integration, at least in the short term. Value chains were broken, borders between countries were closed, and international travel, both for business and tourist reasons, came to a standstill. Accordingly, it can be expected that the globalization index for 2020, which is presented in the context of this study, will reduce significantly. This also impacts the gross domestic product per capita. If the globalization index drops even in the short term due to the coronavirus pandemic the additional income generated by globalization will reduce.

However, resilient data for the year of 2020 will probably only be available in 2022. However, Germany's globalization index for 2018, the last available year of observation, is reduced to provide an initial estimate of the effects of the coronavirus pandemic on globalization and income development in Germany nevertheless. For this purpose, all indicators included in the globalization indices were first examined for influences by the coronavirus pandemic. Several indicators in both the economic and social globalization indices will likely be affected by the coronavirus pandemic. For example, it can be expected that international tourism, an indicator of the social globalization sub-index, in Germany will decline as a result of the coronavirus pandemic.

The next step was that of estimating the likely scope of effects on the indicators, among other things based on OECD

forecasts. These adjusted indicators were used to calculate an adjusted globalization index for Germany for the year of 2018. Using the regression results from Section 2.2 on the impact of globalization on per capita economic growth, the adjusted growth of per capita GDP, and thus the adjusted level of per capita income, is calculated for the year of 2018.

Since the degree to which the individual indicators are affected is uncertain, this calculation took place with two different pandemic-related deductions on the indicators. A weak and a strong influence of the pandemic on the globalization index is assumed respectively for this, in order to cover the area of potential globalization-related income losses due to the pandemic as broadly as possible.

The additional gross domestic product in Germany as a result of globalization was 1,400 euros per capita in the year of 2018. As a result of globalization, per capita income in 2018 was higher than it would have been without advancing globalization, i.e. if the globalization index had remained at the 1990 level, by 1,400 euros. The coronavirus-pandemic-induced reduction in globalization will reduce this difference by 100 to 500 euros in 2018, depending on the assumptions made. Assuming that the influence of the coronavirus pandemic on the 2018 globalization index remains relatively low on an annual average, the globalization-related income per capita in Germany will, thereby, be reduced by around 7 percent, or around 100 euros, to 1,300 euros in 2018. Assuming a more strongly dampening effect of the coronavirus pandemic on Germany's globalization index of 2018, however, would reduce the income due to globalization by more than a third, or around 500 euros, to around 900 euros in 2018.

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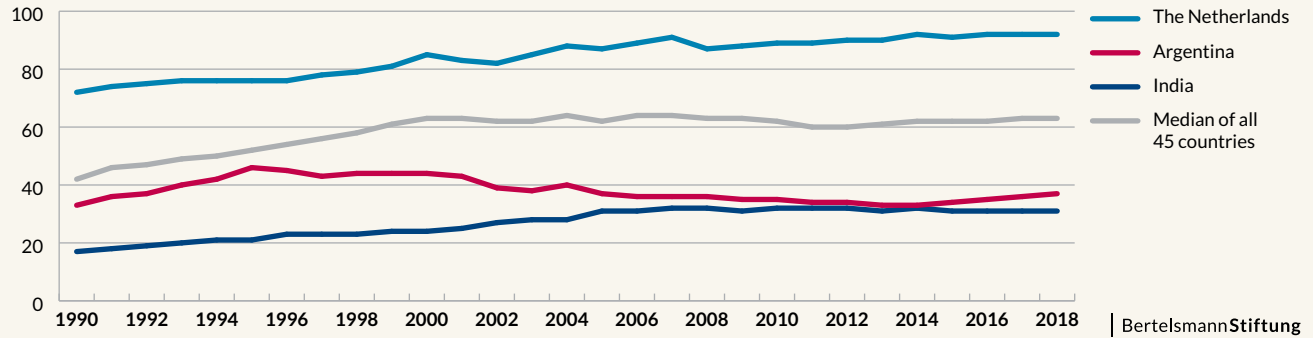
## 4 Country fact sheets

## 4.1 Argentina



After a continuous decline of the degree of globalization from 1995 to 2014, globalization in Argentina started growing again in 2014. Although the country is better positioned than in was in recent years, only India is less well connected globally.

Globalization index for Argentina as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



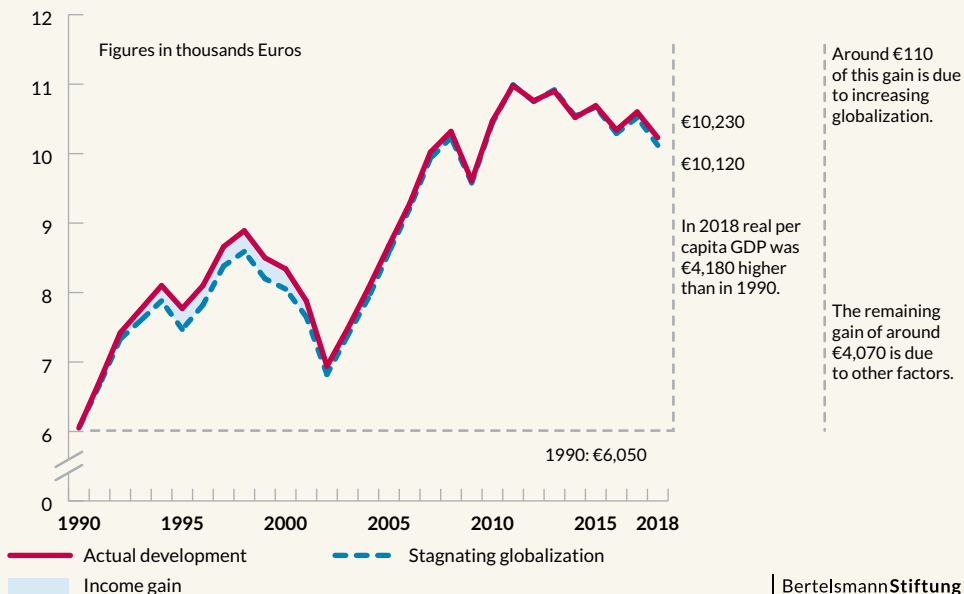
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	33	36	37	40	42	46	45	43	44	44	44	43	39	38
Economy	20	22	23	25	28	33	30	27	27	26	26	23	19	16
Social	32	32	33	37	38	41	43	45	49	50	51	50	49	47
Political	73	80	85	88	90	91	90	91	91	91	92	93	92	93
Sustainability Indices														
Ecological	74	74	74	75	75	75	74	75	75	74	74	75	75	75
Social	63	64	63	62	62	60	61	62	62	62	62	62	63	65

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	40	37	36	36	36	35	35	34	34	33	33	34	35	36	37
Economy	19	16	14	13	12	10	9	7	8	7	7	9	11	12	14
Social	48	48	48	48	52	52	52	52	52	52	52	52	52	52	52
Political	92	92	92	94	93	93	94	94	94	94	93	93	93	93	93
Sustainability Indices															
Ecological	74	74	74	74	73	74	74	74	74	74	74	74	74	74	74
Social	67	69	70	72	73	73	75	76	76	77	77	77	77	78	78

Development of real GDP per capita in Argentina with and without progressing globalization



Average GDP growth per year and resident

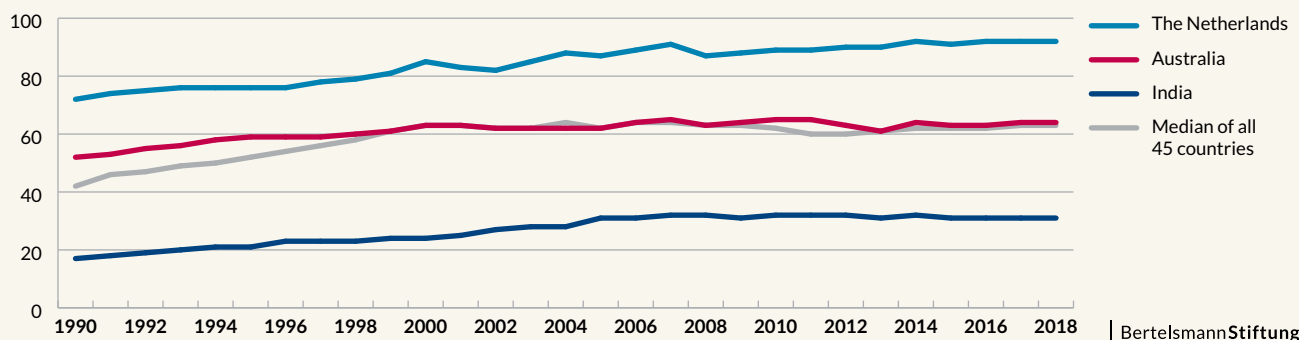
Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
40.	Argentina	124
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

## 4.2 Australia



The slow globalization of Australia has stagnated since the global economic crisis and is developing similarly to the median of all 45 countries. In terms of per capita income gains, Australia is in the front midfield.

Globalization index for Australia as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



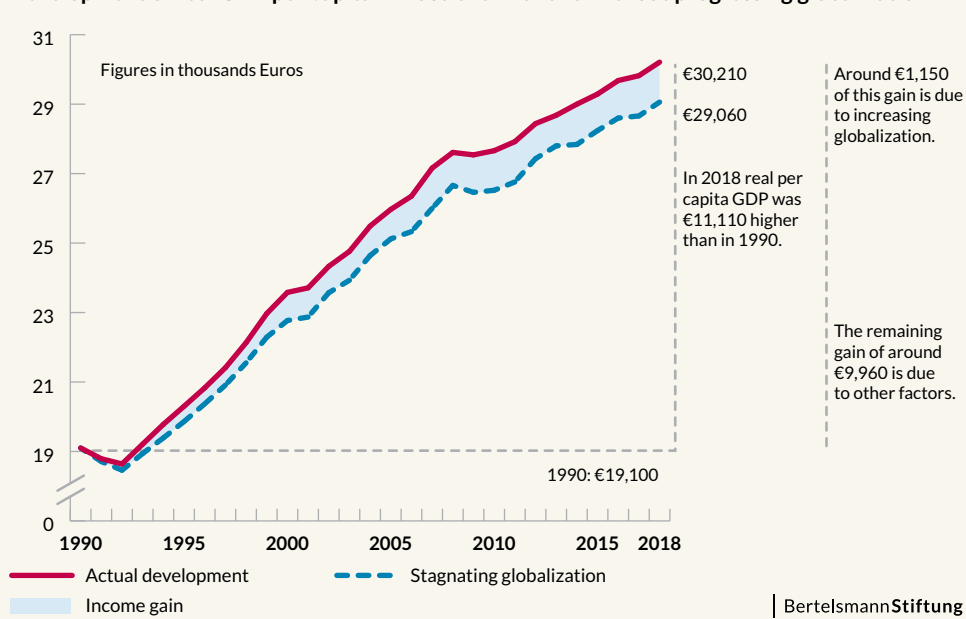
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	52	53	55	56	58	59	59	59	60	61	63	63	62	62
Economy	32	34	34	36	39	40	41	41	42	44	44	45	43	44
Social	83	82	83	84	86	85	85	86	88	89	90	90	89	90
Political	80	82	87	88	88	88	84	85	86	85	90	91	89	89
Sustainability Indices														
Ecological	69	69	69	69	69	69	69	69	68	68	68	68	68	68
Social	66	66	66	66	66	67	67	69	70	75	76	77	79	79

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	62	62	64	65	63	64	65	65	63	61	64	63	63	64	64
Economy	45	44	47	49	45	47	48	48	45	42	47	45	45	46	46
Social	89	90	90	90	90	90	90	89	89	89	89	89	90	89	89
Political	88	87	89	90	90	90	91	90	91	91	91	91	91	91	91
Sustainability Indices															
Ecological	68	68	68	67	67	67	68	68	68	69	70	70	70	70	70
Social	79	80	80	81	82	82	82	82	82	83	83	83	84	84	84

Development of real GDP per capita in Australia with and without progressing globalization



Average GDP growth per year and resident

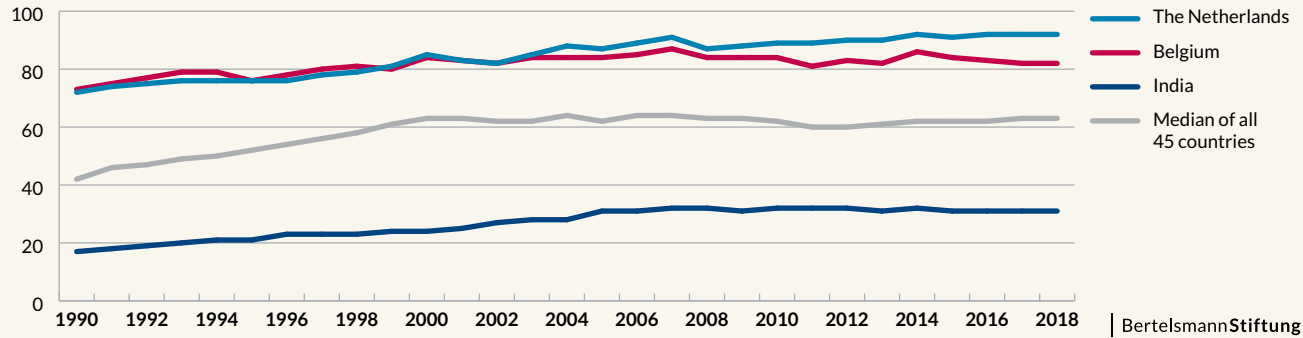
Ranking	Country	in euros
1,	Japan	1,787
2,	Ireland	1,609
3,	Switzerland	1,583
4,	Finland	1,344
5,	Israel	1,275
...		
14,	Australia	804
...		
41,	Russia	115
42,	China	95
43,	Indonesia	64
44,	Nigeria	30
45,	India	24

### 4.3 Belgium



Hardly any other country is as well-connected internationally as Belgium. The country's globalization has stagnated at a very high level since 2000. Due to the low index growth since then, the country only ranks in the midfield in terms of per capita income gains.

Globalization index for Belgium as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



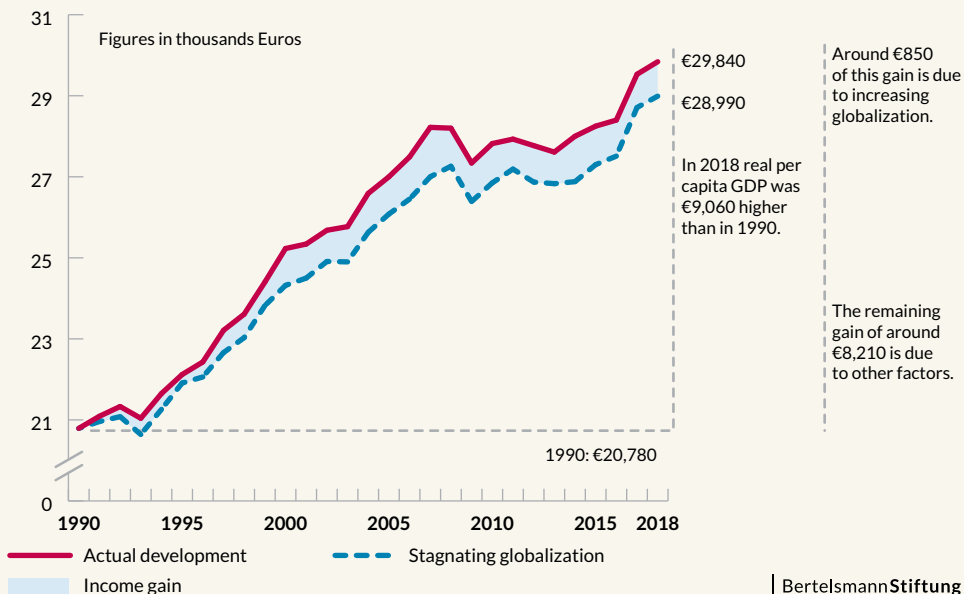
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	73	75	77	79	79	76	78	80	81	80	84	83	82	84
Economy	68	69	69	71	69	65	68	71	73	72	78	77	75	77
Social	75	78	80	82	85	87	89	89	90	91	93	92	93	94
Political	85	90	97	99	99	99	99	100	94	94	95	95	94	94
Sustainability Indices														
Ecological	67	67	67	67	67	67	67	67	67	68	68	68	69	68
Social	68	66	69	66	67	68	67	67	68	72	75	76	77	80

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	84	84	85	87	84	84	84	81	83	82	86	84	83	82	82
Economy	78	76	77	79	74	75	75	71	74	72	78	75	74	72	72
Social	95	95	96	96	96	96	96	97	97	97	96	96	96	96	96
Political	94	94	97	99	99	99	98	97	98	98	97	96	96	96	96
Sustainability Indices															
Ecological	69	69	69	70	70	71	70	71	72	72	73	73	73	73	73
Social	81	82	83	84	85	86	87	88	88	88	88	88	89	89	89

Development of real GDP per capita in Belgium with and without progressing globalization



Average GDP growth per year and resident

Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
17.	<b>Belgium</b>	<b>747</b>
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

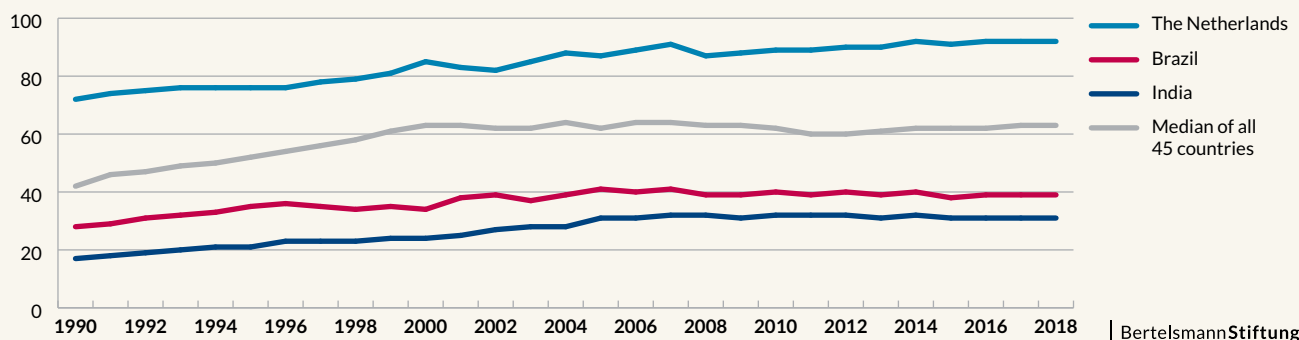


## 4.4 Brazil



Only India and Argentina are less well integrated into the global economy than Brazil. The country's globalization has stagnated at a low level since 2005. The induced per capita income gains are accordingly low. Slight progress has recently been observed in international social integration.

Globalization index for Brazil as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



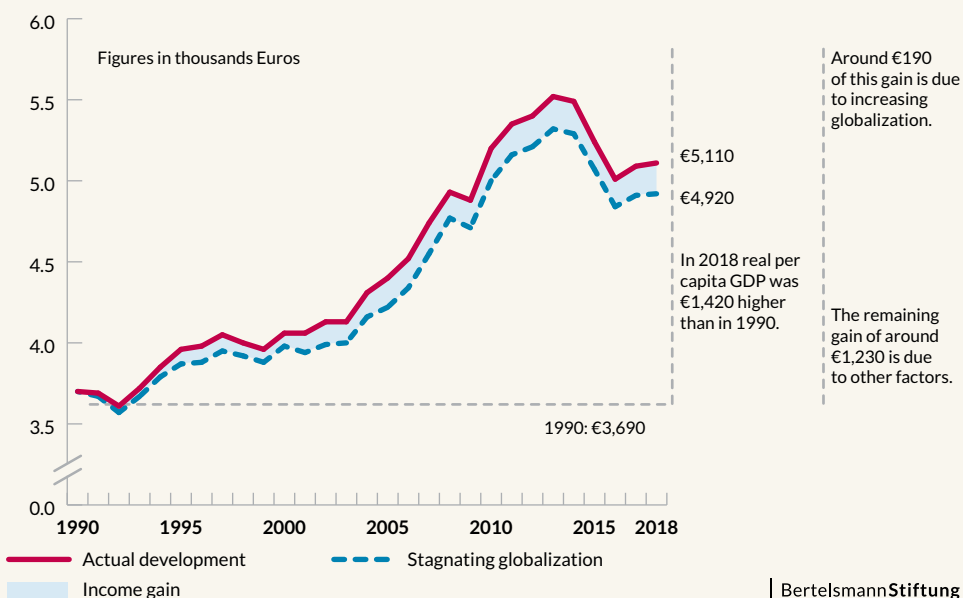
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	28	29	31	32	33	35	36	35	34	35	34	38	39	37
Economy	15	15	16	16	17	20	19	17	16	15	15	21	23	21
Social	24	24	27	28	28	32	35	38	39	40	40	39	39	39
Political	70	79	82	83	85	85	88	87	86	86	86	86	86	86
Sustainability Indices														
Ecological	87	87	87	86	86	86	85	85	85	85	85	85	85	85
Social	48	50	51	50	50	51	50	53	52	53	53	55	56	57

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	39	41	40	41	39	39	40	39	40	39	40	38	39	39	39
Economy	23	25	24	24	20	20	21	20	20	19	20	18	19	19	20
Social	39	39	39	40	41	41	42	42	43	43	44	43	43	43	43
Political	90	91	91	92	93	93	95	95	95	95	95	95	95	95	95
Sustainability Indices															
Ecological	85	86	86	86	86	86	85	85	85	84	84	85	85	85	85
Social	59	60	61	62	63	63	64	66	66	67	68	68	67	67	67

Development of real GDP per capita in Brazil with and without progressing globalization



Average GDP growth per year and resident

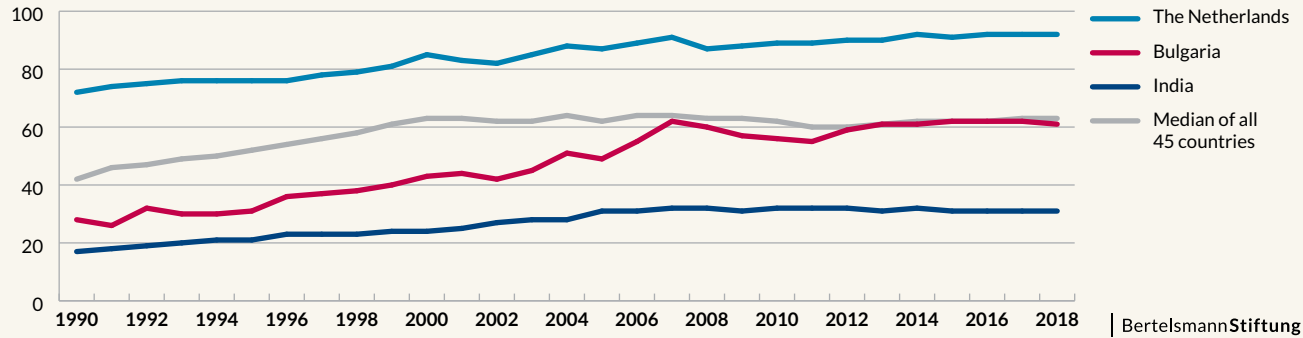
Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
39.	<b>Brazil</b>	<b>136</b>
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

## 4.5 Bulgaria



Bulgaria has steadily increased its integration into the world economy from 1990 to 2007. Since then, the globalization index has been roughly on par with the median of the reporting countries. However, due to the low per capita starting income, gains in this area are still low.

Globalization index for Bulgaria as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



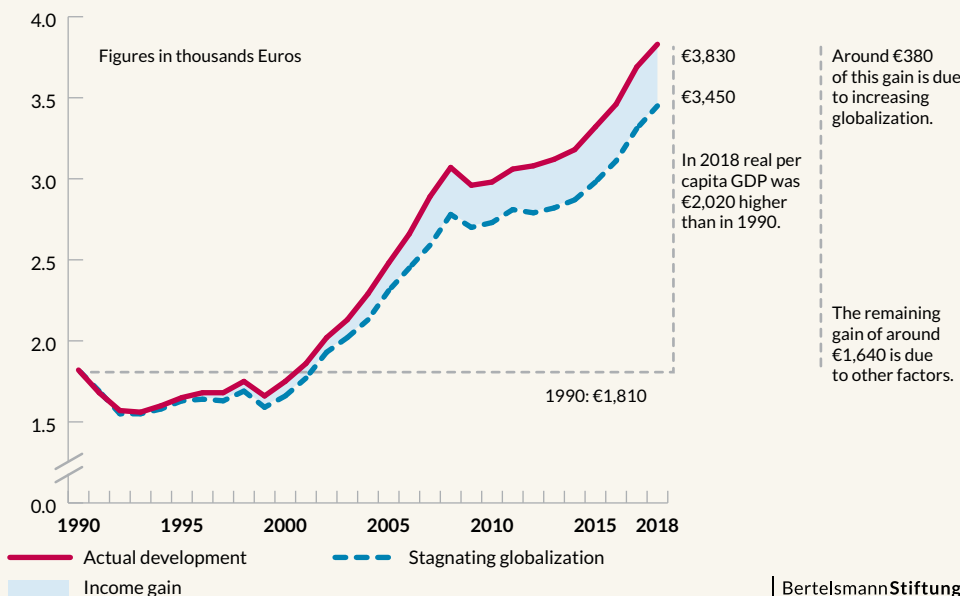
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	28	26	32	30	30	31	36	37	38	40	43	44	42	45
Economy	26	23	23	18	20	15	20	21	22	23	27	27	23	28
Social	20	20	20	20	35	37	40	39	40	46	50	52	55	55
Political	42	43	69	74	54	75	80	81	82	84	85	85	86	87
Sustainability Indices														
Ecological	59	62	62	58	62	62	62	63	65	66	66	66	67	67
Social	60	60	59	59	59	60	60	61	61	61	60	63	65	67

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	51	49	55	62	60	57	56	55	59	61	61	62	62	62	61
Economy	38	36	43	55	51	47	47	45	46	48	49	51	51	51	49
Social	56	56	58	58	60	59	59	58	74	74	74	73	73	73	73
Political	85	84	86	86	89	85	82	82	84	85	83	84	84	84	84
Sustainability Indices															
Ecological	67	68	68	68	69	70	70	69	71	73	72	72	72	72	72
Social	69	69	70	72	73	73	72	72	72	73	72	74	75	77	77

Development of real GDP per capita in Bulgaria with and without progressing globalization



Average GDP growth per year and resident

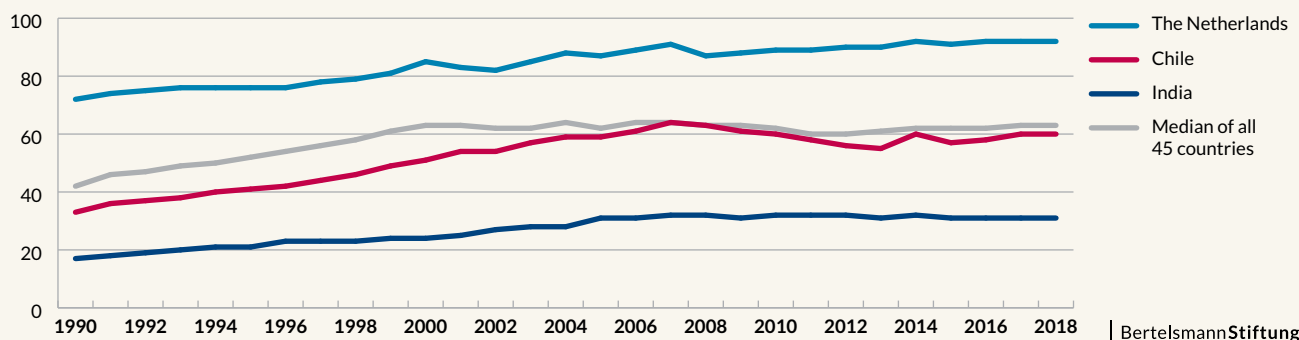
Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
37.	<b>Bulgaria</b>	<b>175</b>
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

## 4.6 Chile



Chile has steadily increased its integration into the world economy from 1990 to 2007. It has since then been roughly at the median of the reporting countries. No other emerging country has benefited more from globalization in terms of per capita income gains.

Globalization index for Chile as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



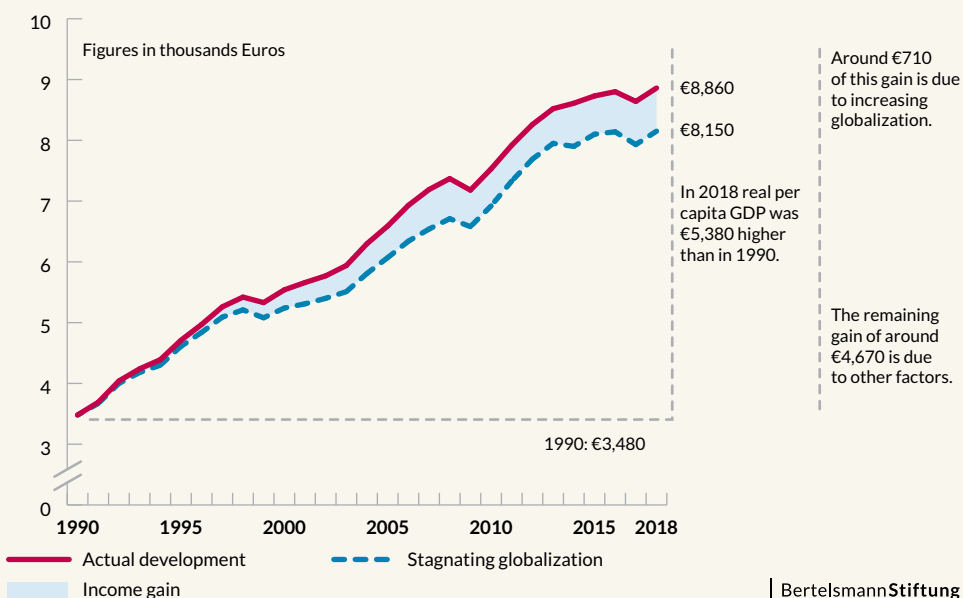
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	33	36	37	38	40	41	42	44	46	49	51	54	54	57
Economy	23	23	24	24	27	27	28	31	33	37	40	44	45	51
Social	37	39	41	44	46	49	50	51	52	52	53	53	52	50
Political	61	70	73	74	73	74	74	77	78	81	82	83	82	81
Sustainability Indices														
Ecological	79	80	80	80	79	79	78	77	77	76	77	78	78	77
Social	57	58	57	57	57	58	57	57	59	58	60	60	61	62

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	51	49	55	62	60	57	56	55	59	61	61	62	62	62	61
Economy	38	36	43	55	51	47	47	45	46	48	49	51	51	51	49
Social	56	56	58	58	60	59	59	58	74	74	74	73	73	73	73
Political	85	84	86	86	89	85	82	82	84	85	83	84	84	84	84
Sustainability Indices															
Ecological	67	68	68	68	69	70	70	69	71	73	72	72	72	72	72
Social	69	69	70	72	73	73	72	72	72	73	72	74	75	77	77

Development of real GDP per capita in Chile with and without progressing globalization



Average GDP growth per year and resident

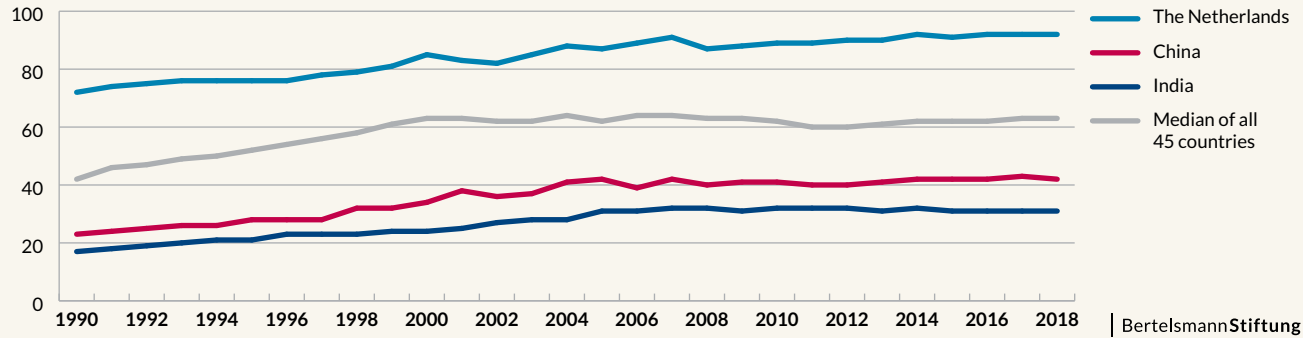
Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
29.	Chile	422
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

## 4.7 China



China is one of the lowest performers in the globalization index. Increasing social and political opening is offset by low economic integration. Per-capita income gains in China are accordingly low.

Globalization index for China as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



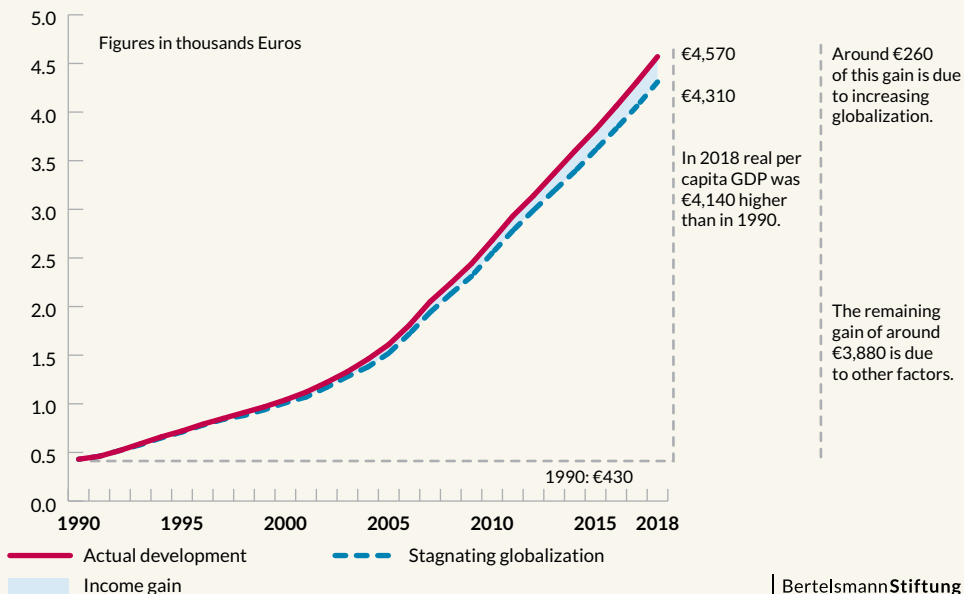
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	23	24	25	26	26	28	28	28	32	32	34	38	36	37
Economy	16	16	17	17	18	18	17	16	15	15	17	23	19	19
Social	15	16	16	16	17	20	21	24	42	45	46	47	48	49
Political	52	57	59	62	63	66	67	69	69	72	72	75	75	76
Sustainability Indices														
Ecological	58	58	59	60	60	60	61	62	63	64	64	63	63	61
Social	62	62	62	61	60	61	62	62	62	63	64	65	66	66

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	40	37	36	36	36	35	35	34	34	33	33	34	35	36	37
Economy	41	42	39	42	40	41	41	40	40	41	42	42	42	43	42
Social	25	27	21	24	22	23	22	21	21	22	25	23	24	25	24
Political	50	52	52	52	53	53	53	52	53	53	54	54	54	54	54
Sustainability Indices															
Ecological	60	58	58	58	57	57	56	55	57	57	58	58	59	59	59
Social	67	67	70	71	73	74	75	76	77	78	78	79	79	80	80

Development of real GDP per capita in China with and without progressing globalization



Average GDP growth per year and resident

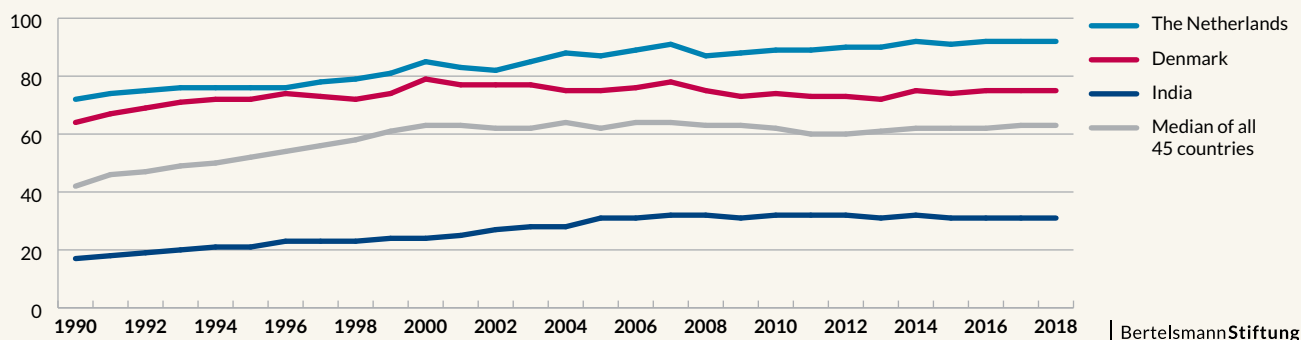
Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

## 4.8 Denmark



Denmark ranks first in the globalization index and in per capita income gains. Following a peak in 2000, the index dropped slightly and has been stagnating since. Hardly any other country is integrated more closely into the global economy than Denmark.

Globalization index for Denmark as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



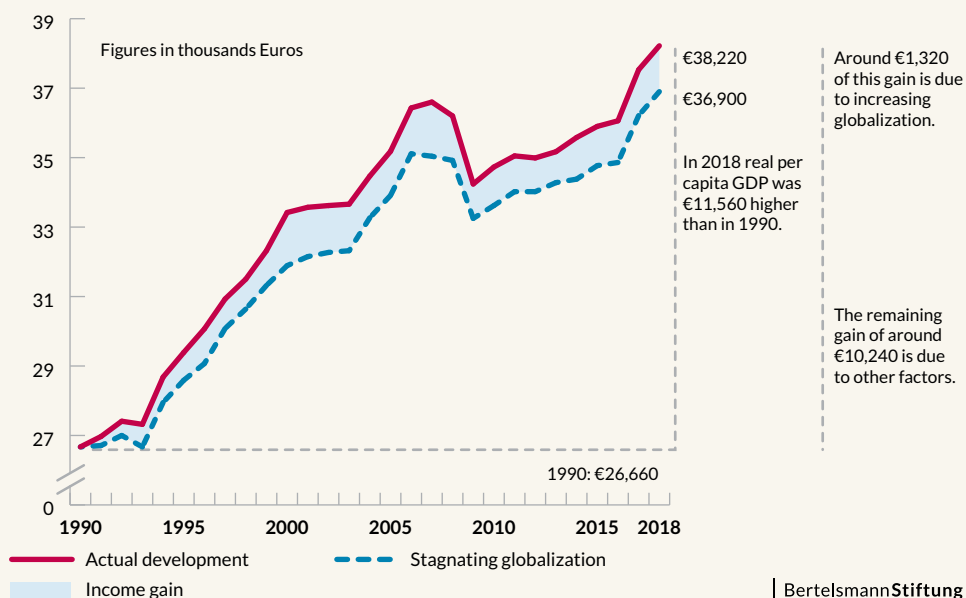
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	64	67	69	71	72	72	74	73	72	74	79	77	77	77
Economy	53	56	57	61	61	61	65	61	60	62	69	67	66	66
Social	76	78	79	81	83	85	85	87	88	89	93	94	93	94
Political	83	89	92	93	94	93	92	93	93	92	93	94	93	92
Sustainability Indices														
Ecological	73	72	73	73	72	73	71	73	74	74	75	75	75	75
Social	73	73	73	73	75	75	75	77	80	81	84	84	87	88

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	75	75	76	78	75	73	74	73	73	72	75	74	75	75	75
Economy	63	63	63	66	63	60	61	60	60	58	62	61	62	63	63
Social	94	95	95	94	94	94	93	93	94	93	93	93	94	93	93
Political	93	93	93	95	94	94	95	94	92	92	94	94	94	94	94
Sustainability Indices															
Ecological	76	77	76	77	78	78	78	79	81	81	82	82	82	82	82
Social	89	89	89	89	89	88	88	88	89	89	90	89	90	90	91

Development of real GDP per capita in Denmark with and without progressing globalization



Average GDP growth per year and resident

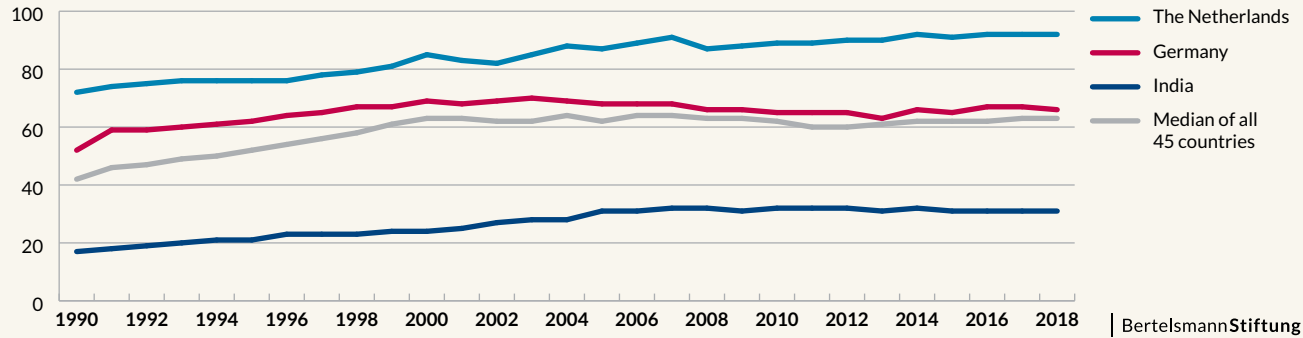
Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
8.	<b>Denmark</b>	<b>1,071</b>
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

## 4.9 Germany



Germany is more globalized than the majority of the reporting countries. Its economic integration stabilized at a somewhat lower level after the global economic crisis. Germany is in the top group in terms of per capita income gains.

Globalization index for Germany as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



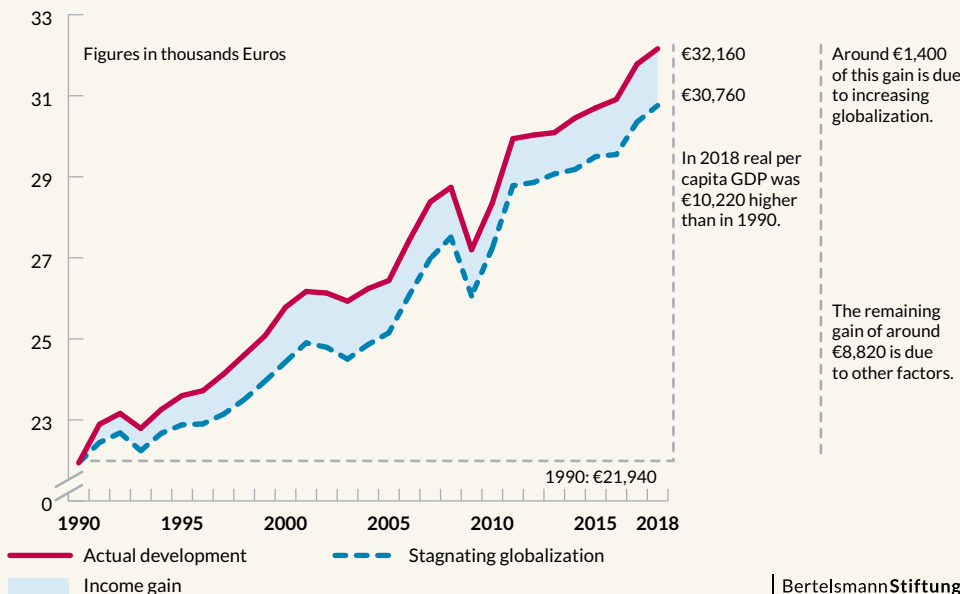
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	52	59	59	60	61	62	64	65	67	67	69	68	69	70
Economy	50	50	49	49	49	50	52	54	55	54	57	54	56	57
Social	71	76	77	78	79	80	81	83	85	87	89	89	89	90
Political	40	67	71	76	77	80	82	83	85	86	87	88	89	89
Sustainability Indices														
Ecological	68	68	69	69	69	69	69	70	70	71	71	71	71	71
Social	70	70	69	71	71	71	71	71	72	75	77	78	80	81

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	69	68	68	68	66	66	65	65	65	63	66	65	67	67	66
Economy	56	53	53	53	49	49	47	47	47	44	49	47	50	50	49
Social	90	91	90	91	91	91	91	90	91	91	91	90	91	91	91
Political	89	90	91	93	92	92	93	92	92	93	92	93	93	94	94
Sustainability Indices															
Ecological	72	72	72	73	73	73	73	74	74	74	75	75	75	75	75
Social	82	82	83	84	85	85	86	87	87	88	89	89	89	89	88

Development of real GDP per capita in Germany with and without progressing globalization



Average GDP growth per year and resident

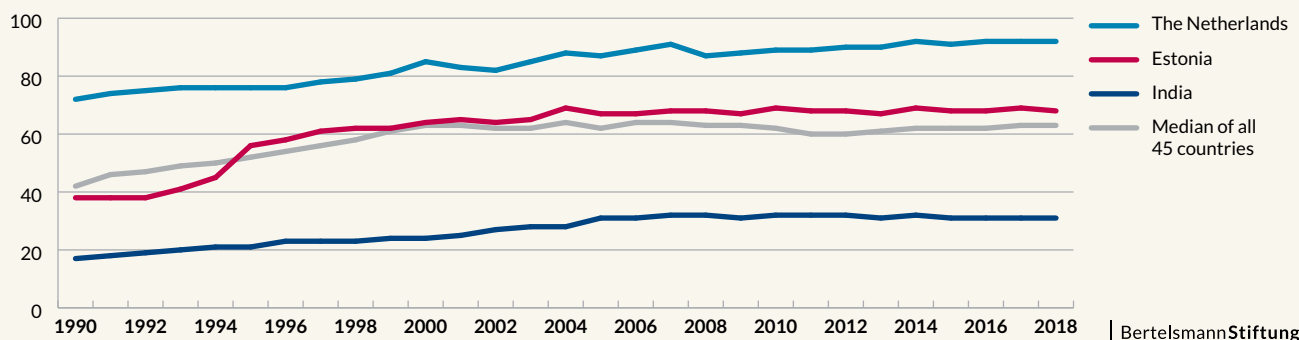
Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
7.	Germany	1,112
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

## 4.10 Estonia



Estonia has become increasingly linked in all areas since the end of the Eastern Bloc in 1992. Since 2004, its globalization has stagnated at a medium level. Estonia has a closer global network than the majority of the reporting countries. The country's per capita income gains generated by globalization is in the global midfield.

Globalization index for Estonia as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



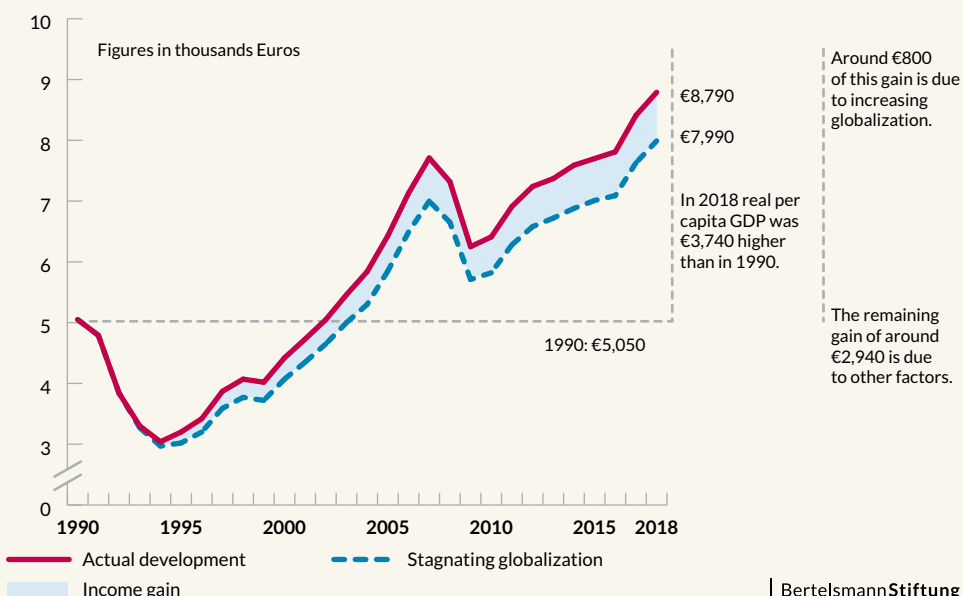
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	38	38	38	41	45	56	58	61	62	62	64	65	64	65
Economy	49	49	47	50	54	59	61	64	64	64	65	65	64	65
Social	45	45	45	46	49	63	66	66	69	70	72	72	74	74
Political	0	0	5	8	14	39	41	48	48	50	52	55	56	57
Sustainability Indices														
Ecological	60	60	61	63	63	66	67	68	70	71	72	72	73	71
Social	62	62	61	61	61	62	63	64	65	68	70	71	74	74

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	69	67	67	68	68	67	69	68	68	67	69	68	68	69	68
Economy	69	67	65	67	65	63	65	64	64	62	65	62	63	63	62
Social	74	74	75	76	76	76	77	77	77	77	77	77	76	77	77
Political	62	62	65	66	69	70	70	72	73	73	74	76	77	77	77
Sustainability Indices															
Ecological	71	72	72	71	72	74	72	72	73	71	72	72	72	72	72
Social	76	78	80	80	81	79	78	79	81	82	82	85	85	86	86

Development of real GDP per capita in Estonia with and without progressing globalization



Average GDP growth per year and resident

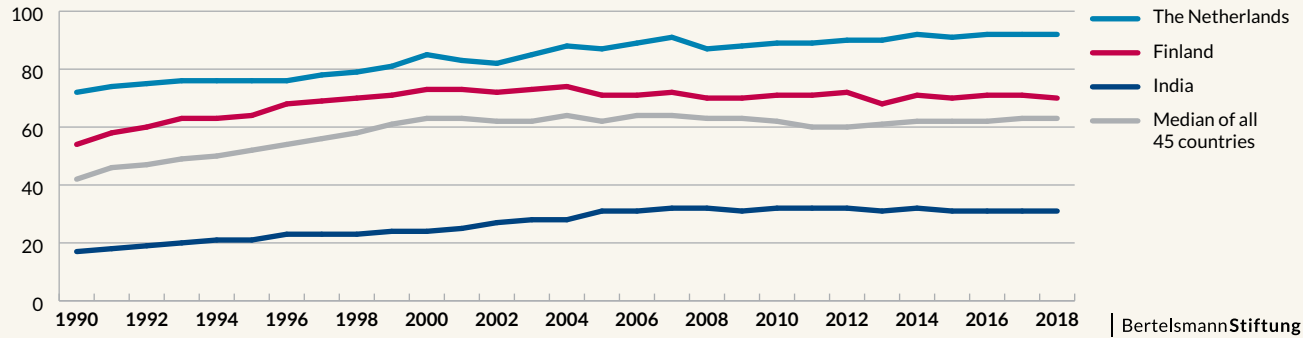
Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
24.	<b>Estonia</b>	<b>461</b>
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

### 4.11 Finland



The degree of globalization in Finland grew until the early 2000s and has been stagnating since. Thanks to the early onset of economic integration, the country profited greatly from globalization. It is in the top group of per capita income gains by international comparison.

Globalization index for Finland as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



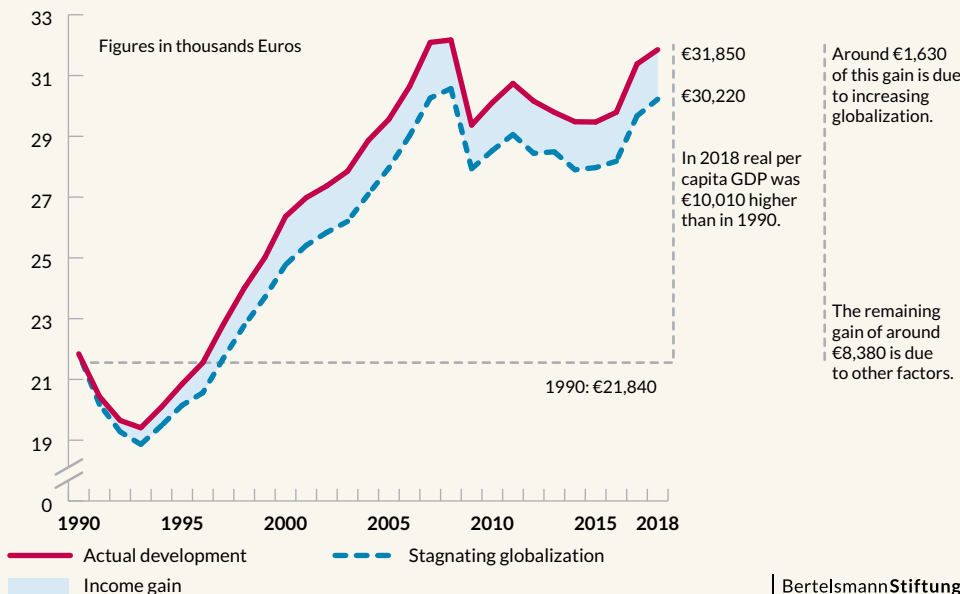
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	54	58	60	63	63	64	68	69	70	71	73	73	72	73
Economy	45	47	50	54	54	55	55	57	57	58	63	61	60	61
Social	58	60	60	61	63	66	84	86	87	86	88	88	90	90
Political	77	87	88	90	91	91	91	91	91	91	91	92	89	91
Sustainability Indices														
Ecological	78	78	79	79	78	79	78	78	79	79	80	79	79	77
Social	74	75	73	71	72	73	74	74	75	78	78	80	82	83

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	74	71	71	72	70	70	71	71	72	68	71	70	71	71	70
Economy	61	59	58	60	56	56	58	59	60	53	58	57	58	58	57
Social	90	89	89	90	90	89	90	90	89	89	89	88	88	88	88
Political	94	88	90	92	90	91	90	89	91	92	93	93	93	94	94
Sustainability Indices															
Ecological	78	80	78	79	80	80	79	80	82	83	83	84	84	84	84
Social	84	85	86	88	89	88	88	89	90	90	89	88	89	89	89

Development of real GDP per capita in Finland with and without progressing globalization



Average GDP growth per year and resident

Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	<b>Finland</b>	<b>1,344</b>
5.	Israel	1,275
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

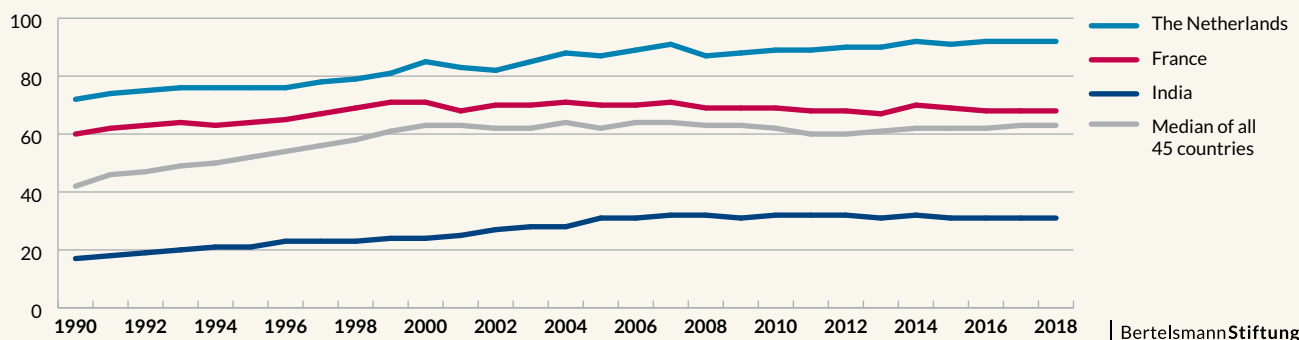


## 4.12 France



The globalization of France is slightly above-average. The country is very strongly connected, in particular in political terms. France is also in the midfield in terms of per capita income gains generated by globalization.

Globalization index for France as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



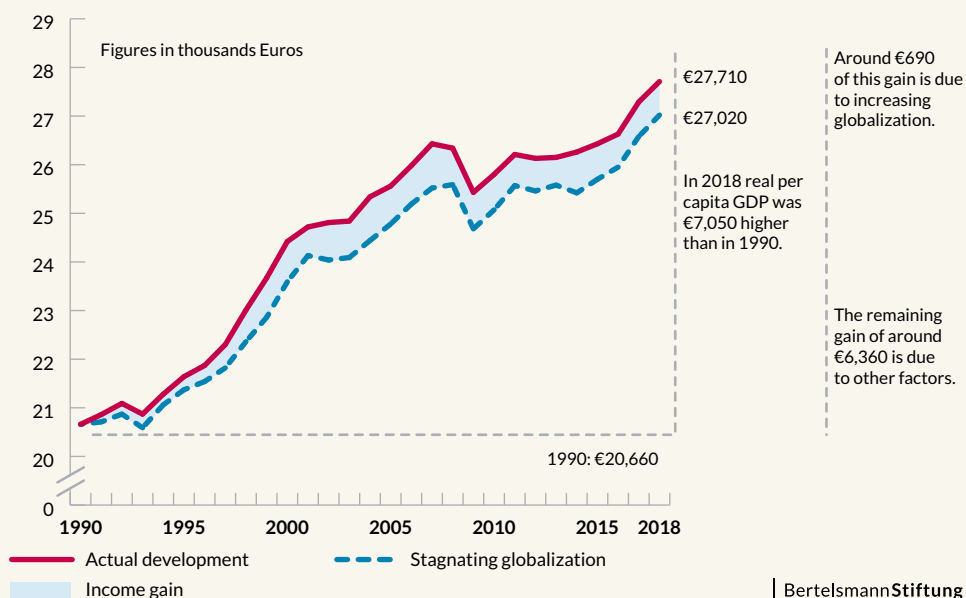
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	60	62	63	64	63	64	65	67	69	71	71	68	70	70
Economy	45	46	47	48	45	46	48	51	53	57	56	50	54	54
Social	75	77	78	79	82	83	84	85	86	87	88	89	89	89
Political	90	95	98	100	100	100	97	97	98	97	97	98	97	97
Sustainability Indices														
Ecological	75	75	76	76	76	76	76	76	76	76	76	76	75	75
Social	64	64	64	64	64	65	65	65	65	66	67	70	70	72

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	71	70	70	71	69	69	69	68	68	67	70	69	68	68	68
Economy	57	53	53	54	51	52	51	49	50	48	53	51	50	51	50
Social	89	91	91	92	92	93	93	93	93	93	93	92	91	91	91
Political	97	98	98	99	99	99	99	99	99	99	99	99	99	99	99
Sustainability Indices															
Ecological	75	75	75	76	76	76	76	76	77	77	77	77	77	77	77
Social	72	72	73	78	78	78	79	79	82	81	81	81	81	85	85

Development of real GDP per capita in France with and without progressing globalization



Average GDP growth per year and resident

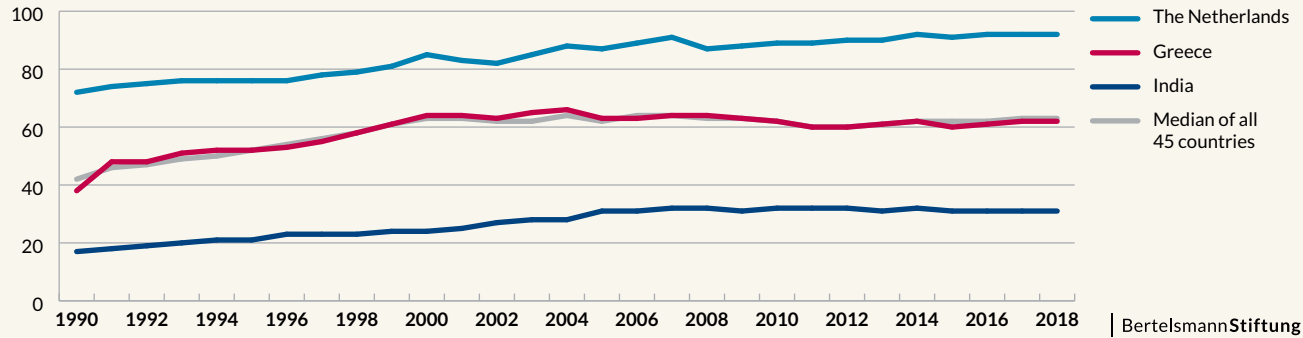
Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
20.	France	625
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

### 4.13 Greece



Greece increased its integration into the world economy from 1990 to 2004. Since then, its globalization index has stagnated. The country ranks among the lowest in the EU and is roughly on the world median. Its early opening allowed Greece's per capita income gains to benefit greatly from globalization.

Globalization index for Greece as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



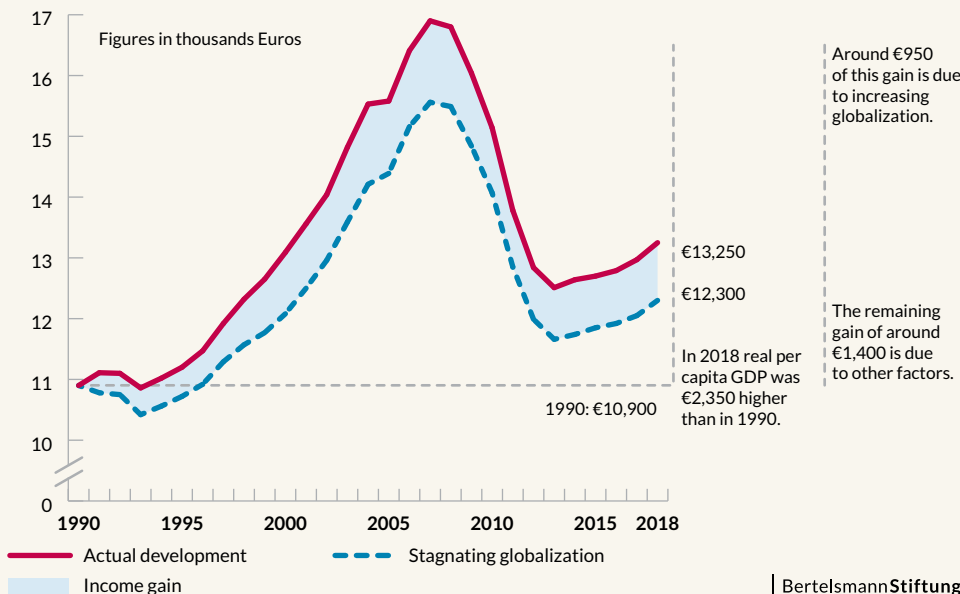
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	38	48	48	51	52	52	53	55	58	61	64	64	63	65
Economy	34	35	36	37	37	37	39	42	45	49	54	49	48	51
Social	41	54	53	59	61	62	64	65	65	68	68	84	85	85
Political	48	78	81	86	85	84	85	86	87	87	87	88	89	90
Sustainability Indices														
Ecological	71	71	71	71	71	71	71	71	70	71	70	70	70	70
Social	62	62	62	62	62	62	65	66	66	66	67	68	69	70

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	66	63	63	64	64	63	62	60	60	61	62	60	61	62	62
Economy	52	47	47	48	46	45	43	41	41	42	44	41	42	43	44
Social	85	86	85	86	87	86	86	86	86	85	85	85	86	87	87
Political	89	89	91	93	94	92	92	92	92	92	92	92	92	92	92
Sustainability Indices															
Ecological	70	70	71	71	71	71	72	72	73	74	74	74	75	75	75
Social	72	73	74	76	77	77	76	76	74	74	74	75	76	76	78

Development of real GDP per capita in Finland with and without progressing globalization



Average GDP growth per year and resident

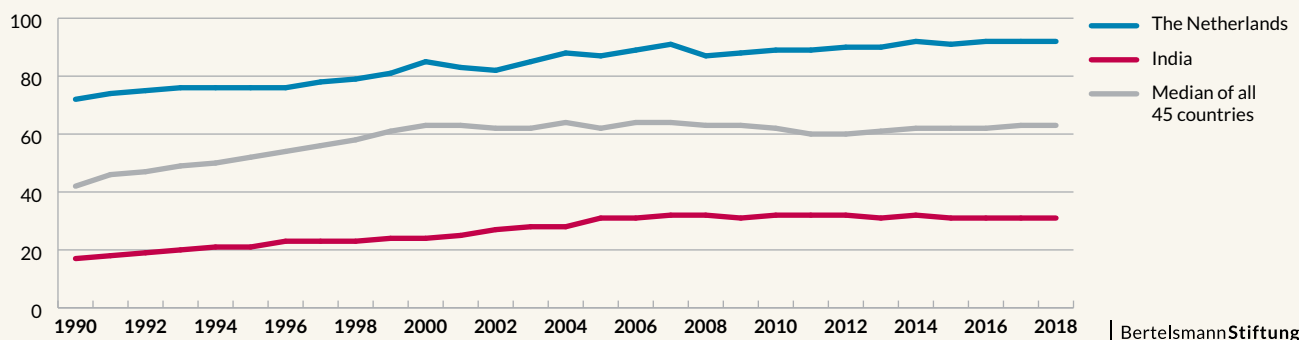
Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
11.	Greece	894
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

## 4.14 India



India holds the last place in both the globalization index and per capita income gains due to globalization. The country's economy in particular is hardly integrated into any global trade flows.

Globalization index for India as compared to the Netherlands (highest value in 2018)



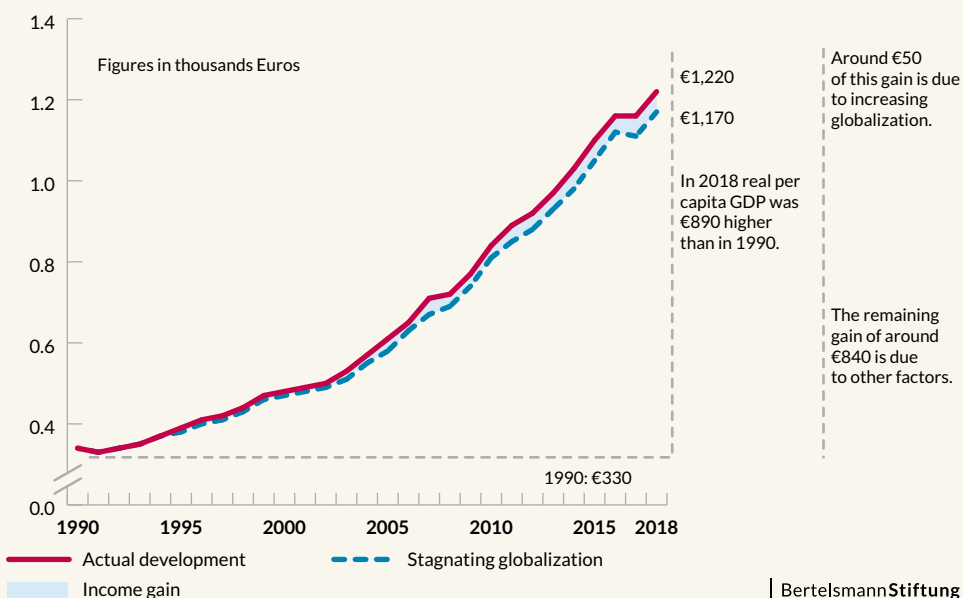
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	17	18	19	20	21	21	23	23	23	24	24	25	27	28
Economy	5	6	6	6	6	6	5	5	4	4	4	4	8	10
Social	0	1	2	2	3	7	19	20	21	22	23	24	24	24
Political	70	72	77	81	83	82	83	83	83	84	86	87	86	87
Sustainability Indices														
Ecological	67	66	66	66	65	65	65	64	65	64	64	64	64	64
Social	31	30	32	34	36	37	37	36	37	38	39	40	41	42

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	28	31	31	32	32	31	32	32	32	31	32	31	31	31	31
Economy	11	14	13	15	15	13	14	14	14	12	15	13	12	12	12
Social	24	24	27	26	25	25	25	26	26	26	26	27	27	27	27
Political	86	88	90	91	91	91	92	92	92	92	92	92	92	93	93
Sustainability Indices															
Ecological	63	63	62	62	61	60	60	59	60	59	59	59	59	59	59
Social	44	45	46	47	49	50	52	54	55	57	59	59	60	63	63

Development of real GDP per capita in India with and without progressing globalization



Average GDP growth per year and resident

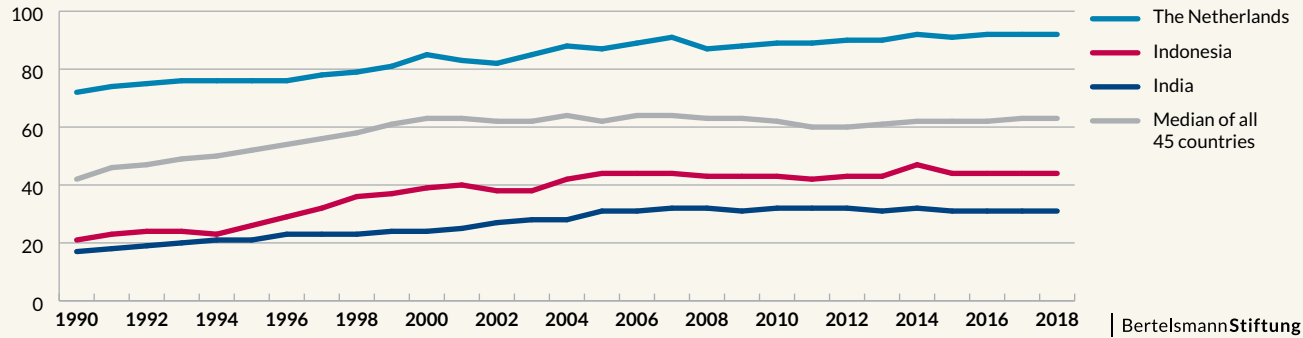
Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

### 4.15 Indonesia



Indonesia expanded its global integration until 2004. Since then they have stagnated at a low level. The country occupies one of the bottom places in the globalization index and in per capita income.

Globalization index for Indonesia as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



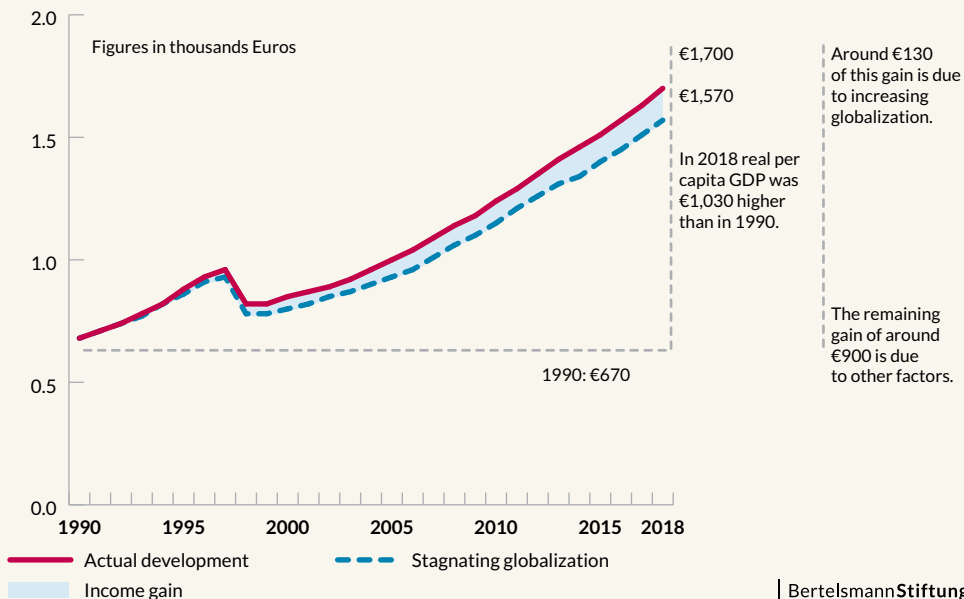
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	21	23	24	24	23	26	29	32	36	37	39	40	38	38
Economy	9	11	11	10	9	13	15	19	27	26	28	29	25	26
Social	15	19	22	19	19	22	25	26	28	31	33	33	35	35
Political	62	63	67	70	70	72	74	75	74	75	76	76	77	78
Sustainability Indices														
Ecological	86	85	85	84	84	83	83	82	83	82	82	81	81	81
Social	48	49	50	51	51	51	54	54	54	54	54	54	54	55

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	42	44	44	44	43	43	43	42	43	43	47	44	44	44	44
Economy	31	34	34	33	30	30	27	25	26	26	32	27	27	27	27
Social	37	37	38	39	42	43	51	52	53	52	54	54	54	54	54
Political	78	79	81	82	83	84	84	85	86	86	86	86	87	87	87
Sustainability Indices															
Ecological	80	80	80	80	80	79	79	78	78	79	80	79	79	79	79
Social	55	56	57	57	57	59	61	62	63	64	63	64	66	67	68

Development of real GDP per capita in Indonesia with and without progressing globalization



Average GDP growth per year and resident

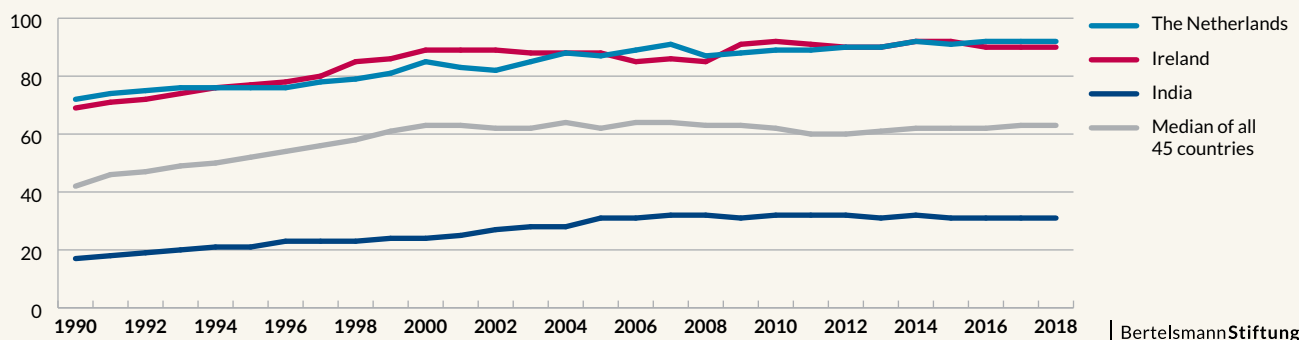
Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

## 4.16 Ireland



Only the Netherlands outperforms Ireland in the globalization index. The high index is powered by the country's strong economic network. The country ranks second in globalization-related per capita income gains as well.

Globalization index for Ireland as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



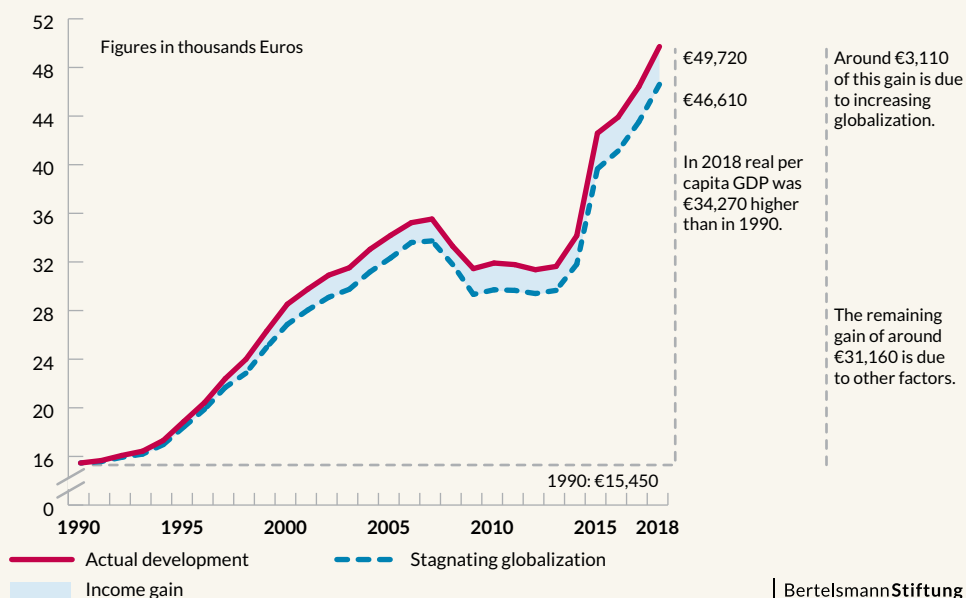
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	69	71	72	74	76	77	78	80	85	86	89	89	89	88
Economy	72	72	73	74	76	78	79	80	89	89	94	93	93	91
Social	65	66	67	68	69	71	73	74	76	78	78	79	80	81
Political	67	72	75	79	81	82	83	85	84	86	86	87	88	87
Sustainability Indices														
Ecological	73	73	73	73	73	73	73	73	73	73	73	72	73	73
Social	59	59	60	60	61	62	62	63	64	66	68	68	69	71

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	88	88	85	86	85	91	92	91	90	90	92	92	90	90	90
Economy	91	90	85	87	85	89	91	89	87	87	91	91	88	87	87
Social	80	81	82	81	82	99	98	98	97	97	97	98	97	97	97
Political	87	88	87	89	87	91	89	91	91	91	91	91	91	92	92
Sustainability Indices															
Ecological	73	73	74	74	74	75	75	76	76	76	77	77	77	77	77
Social	72	73	75	76	77	75	75	76	76	77	79	80	82	82	83

Development of real GDP per capita in Ireland with and without progressing globalization



Average GDP growth per year and resident

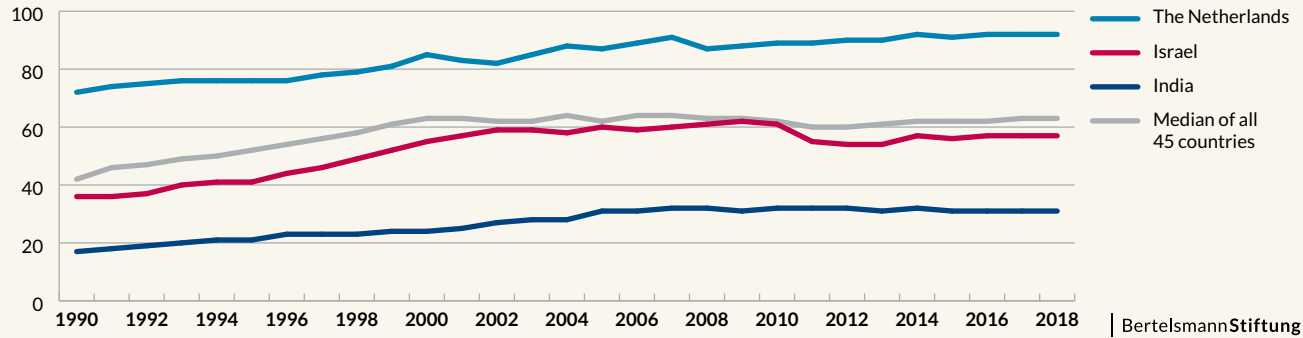
Ranking	Country	in euros
1.	Japan	1,787
2.	<b>Ireland</b>	<b>1,609</b>
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

### 4.17 Israel



Israel became increasingly globalized until 2005. Since then, its globalization index has stagnated at a medium level. This is particular due to the country's low level of political integration. Its high starting level and early globalization nevertheless place Israel in the top ranks of per capita income gains.

Globalization index for Israel as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



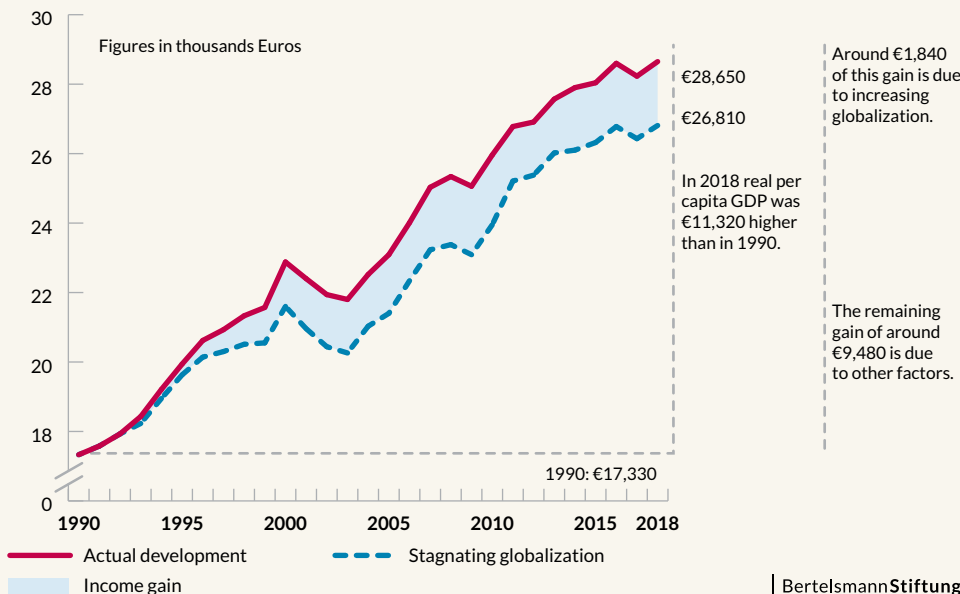
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	36	36	37	40	41	41	44	46	49	52	55	57	59	59
Economy	33	31	31	32	33	32	35	39	42	47	52	51	54	55
Social	41	43	43	55	57	60	62	63	65	65	65	80	79	79
Political	42	45	46	48	49	50	51	51	52	52	52	52	53	53
Sustainability Indices														
Ecological	53	53	53	53	52	52	52	52	52	53	52	52	53	53
Social	63	64	64	65	66	67	67	67	67	69	70	70	70	70

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	58	60	59	60	61	62	61	55	54	54	57	56	57	57	57
Economy	51	55	52	53	50	50	49	44	43	43	48	46	47	47	47
Social	80	80	80	81	81	80	81	81	81	81	81	81	82	82	82
Political	55	56	57	57	77	78	79	62	61	61	59	61	61	61	61
Sustainability Indices															
Ecological	54	54	54	55	55	55	55	55	54	55	55	55	55	55	55
Social	71	72	72	75	78	79	80	81	81	82	83	85	85	86	86

Development of real GDP per capita in Israel with and without progressing globalization



Average GDP growth per year and resident

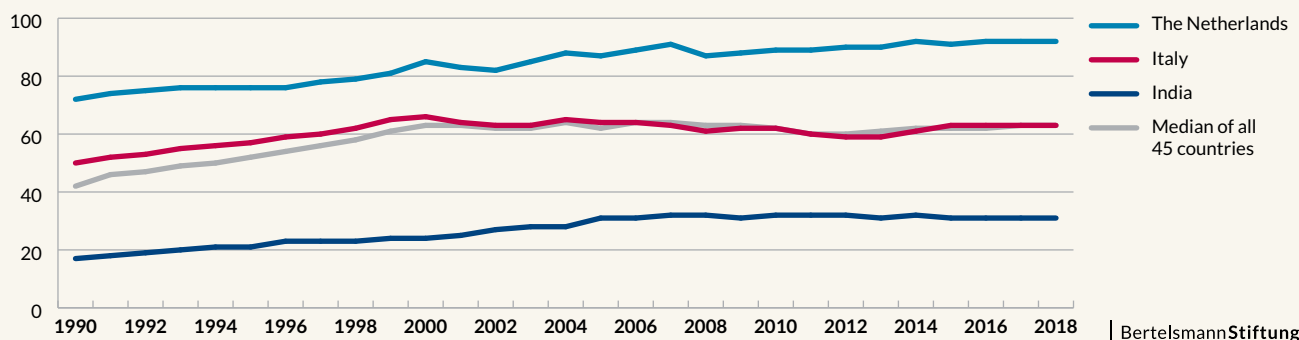
Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

## 4.18 Italy



Italy is ranked in the midfield of the globalization index. No other country is better networked internationally on a political level than Italy. However, the below-average integration of the Italian economy balances this out in the overall index. Italy achieves average per capita income gains through globalization.

Globalization index for Italy as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



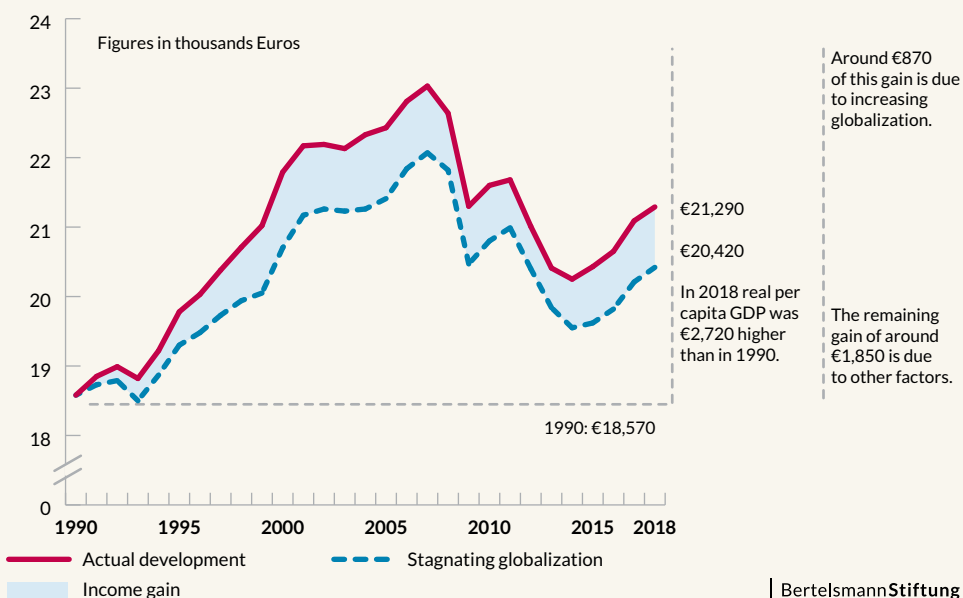
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	50	52	53	55	56	57	59	60	62	65	66	64	63	63
Economy	35	36	37	39	39	43	44	45	47	50	51	48	46	45
Social	60	62	64	63	64	67	69	70	72	80	82	82	82	82
Political	84	90	93	97	96	93	93	94	95	95	95	96	96	96
Sustainability Indices														
Ecological	71	71	72	72	72	71	72	72	71	71	71	72	72	71
Social	61	62	63	62	63	62	63	64	64	67	69	70	71	72

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	65	64	64	63	61	62	62	60	59	59	61	63	63	63	63
Economy	49	48	46	45	42	43	42	39	38	37	41	44	43	44	44
Social	82	82	82	82	83	83	83	83	83	83	83	83	84	84	84
Political	95	96	98	99	100	100	99	99	99	99	99	99	99	99	99
Sustainability Indices															
Ecological	71	71	72	72	73	74	74	73	74	75	76	75	76	76	76
Social	73	74	76	77	78	78	79	79	78	80	80	80	81	82	85

Development of real GDP per capita in Italy with and without progressing globalization



Average GDP growth per year and resident

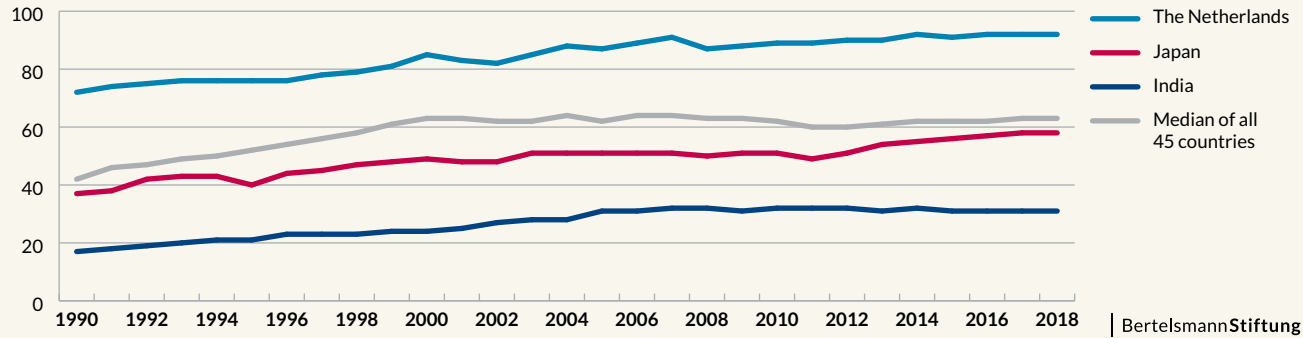
Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
18.	Italy	742
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

### 4.19 Japan



Japan is in the midfield in the globalization index. After a long period of stagnation, the country started increasing its economic globalization in 2012. As a result of this and its high starting level, Japan has the highest globalization-induced per capita income gains in the world.

Globalization index for Japan as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



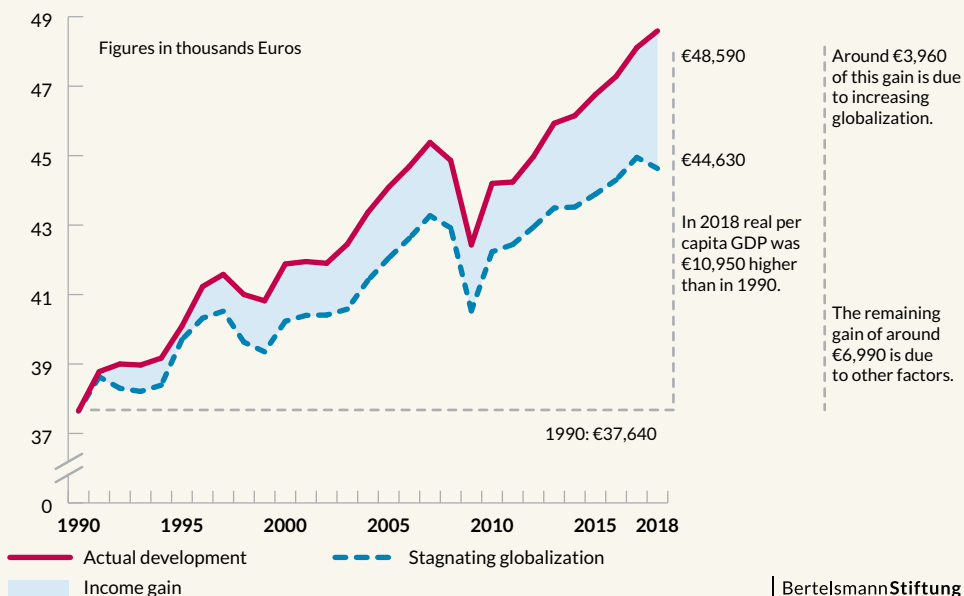
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	37	38	42	43	43	40	44	45	47	48	49	48	48	51
Economy	31	31	30	30	30	30	30	31	33	34	36	35	32	37
Social	35	36	38	40	41	43	45	46	52	53	54	54	55	55
Political	55	61	82	83	82	65	83	84	84	83	83	84	87	87
Sustainability Indices														
Ecological	71	71	71	71	70	70	70	70	71	70	70	70	70	70
Social	65	65	65	65	67	68	68	69	69	70	72	73	74	75

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	51	51	51	51	50	51	51	49	51	54	55	56	57	58	58
Economy	37	38	33	33	31	32	31	29	31	36	38	40	41	43	43
Social	56	56	72	72	72	71	71	71	71	71	71	71	72	72	72
Political	87	85	86	87	86	87	88	89	90	89	88	90	89	89	89
Sustainability Indices															
Ecological	70	70	70	70	70	71	70	70	70	70	70	70	71	71	70
Social	77	78	78	79	79	80	80	80	80	81	82	82	83	82	82

Development of real GDP per capita in Japan with and without progressing globalization



Average GDP growth per year and resident

Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

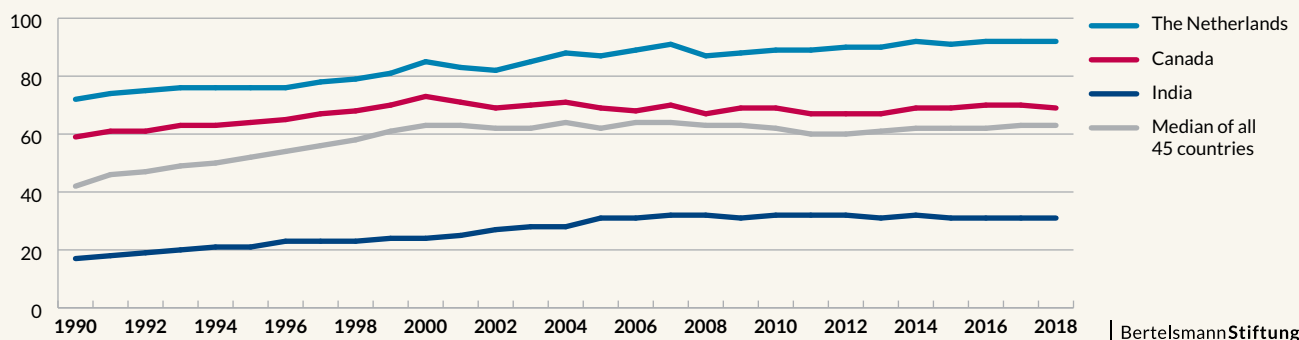


## 4.20 Canada



Starting on a high level in 1990, Canada hardly increased its degree of globalization at all. The country ranks in the top midfield both in the globalization index and in per capita income gains due to globalization.

Globalization index for Canada as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



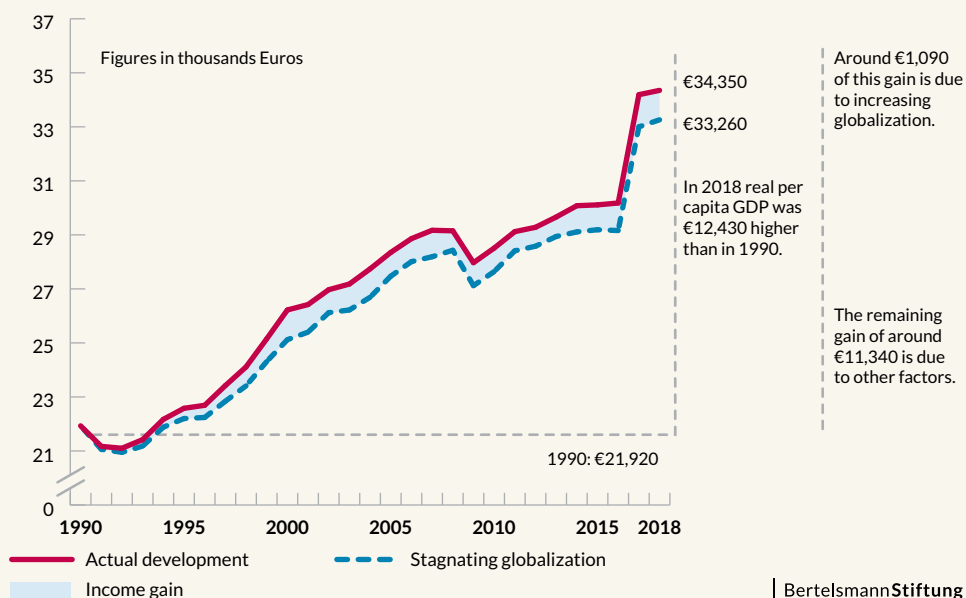
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	59	61	61	63	63	64	65	67	68	70	73	71	69	70
Economy	42	42	42	43	43	45	47	49	51	53	57	55	52	54
Social	88	88	89	90	91	92	93	94	96	96	97	97	97	97
Political	83	90	92	94	95	95	94	94	93	93	94	94	94	94
Sustainability Indices														
Ecological	73	74	73	74	73	73	73	73	73	73	72	73	73	72
Social	68	68	68	68	69	69	70	71	72	74	77	78	78	78

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	71	69	68	70	67	69	69	67	67	67	69	69	70	70	69
Economy	55	51	51	53	48	51	51	48	48	48	53	52	54	54	52
Social	97	97	97	97	96	96	96	96	96	95	95	95	95	95	95
Political	94	94	94	94	94	94	94	94	94	94	93	94	93	93	93
Sustainability Indices															
Ecological	73	73	73	73	73	74	74	74	75	75	75	75	75	75	75
Social	78	79	79	80	80	80	80	81	81	82	82	83	83	83	84

Development of real GDP per capita in Canada with and without progressing globalization



Average GDP growth per year and resident

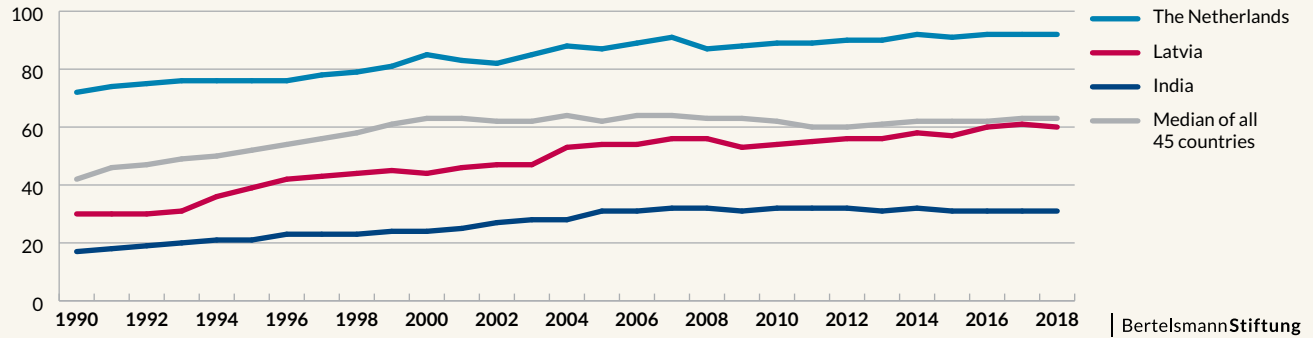
Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
16.	Canada	757
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

## 4.21 Latvia



Latvia ranks in the midfield for the globalization index. In spite of increasing economic opening of the country, a stagnating development of political globalization slows down its economy. The country's per capita income gains are in the lower midfield of the reporting countries.

Globalization index for Latvia as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



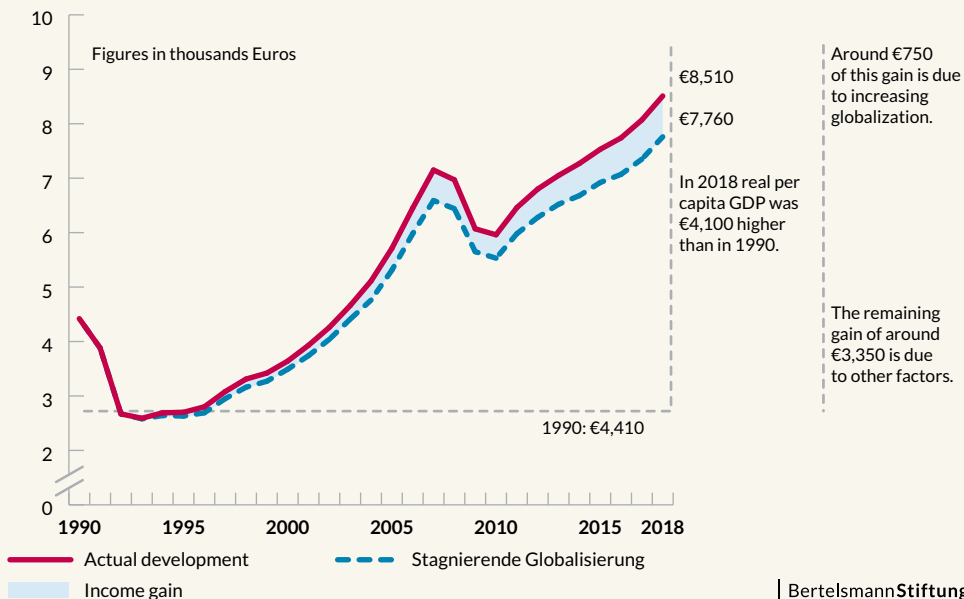
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	30	30	30	31	36	39	42	43	44	45	44	46	47	47
Economy	32	32	32	34	36	39	44	43	44	43	40	44	44	45
Social	46	46	46	43	54	55	56	59	60	60	61	63	64	65
Political	7	7	5	10	17	21	22	28	29	34	35	36	37	37
Sustainability Indices														
Ecological	75	75	76	77	78	80	80	81	82	83	83	83	83	83
Social	65	65	63	58	58	58	60	63	63	66	67	67	70	72

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	53	54	54	56	56	53	54	55	56	56	58	57	60	61	60
Economy	50	51	50	53	52	47	49	50	52	51	54	53	54	55	55
Social	70	72	73	72	72	73	73	74	72	73	73	73	74	74	74
Political	42	44	49	50	51	52	52	51	53	53	54	55	64	64	64
Sustainability Indices															
Ecological	83	83	83	83	83	84	82	83	84	84	85	84	84	84	84
Social	74	76	78	79	79	76	75	77	78	80	79	80	80	81	82

Development of real GDP per capita in Latvia with and without progressing globalization



Average GDP growth per year and resident

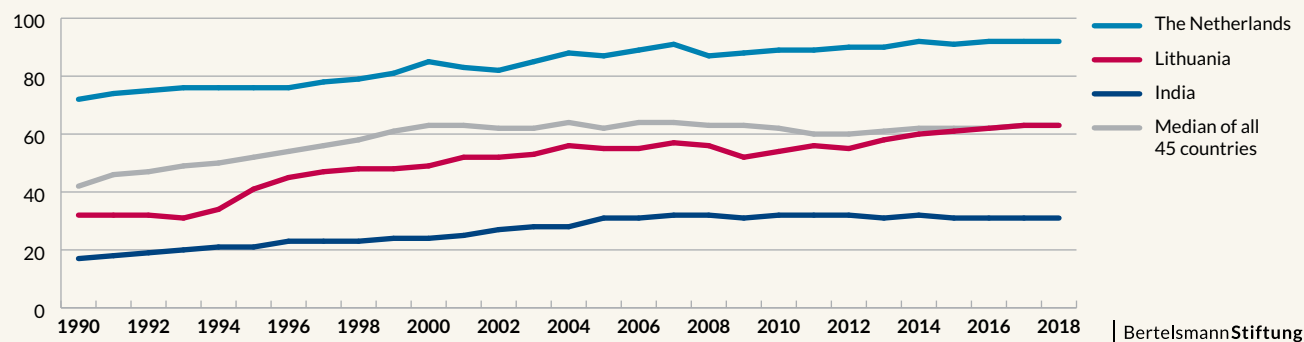
Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
31.	Latvia	340
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

## 4.22 Lithuania



Lithuania's globalization had two waves: One took place in the 1990s and the other after the global economic crisis of 2008/2009. The country currently ranks in the midfield middle of the globalization index and the per capita income gains generated by globalization.

Globalization index for Lithuania as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



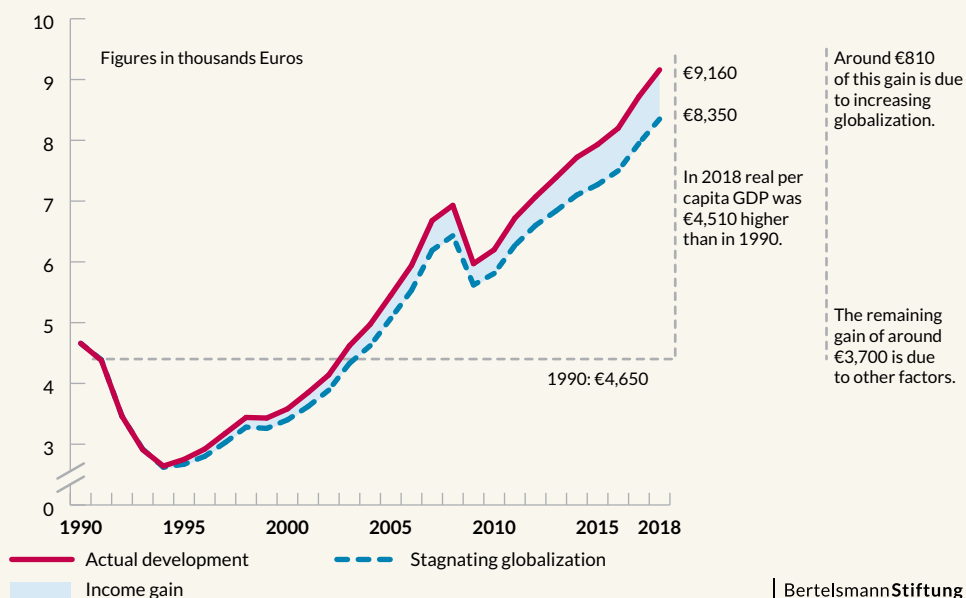
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	32	32	32	31	34	41	45	47	48	48	49	52	52	53
Economy	39	39	37	35	32	40	42	43	43	42	42	46	46	47
Social	43	42	42	42	41	42	56	59	61	60	61	62	65	65
Political	3	3	6	11	34	44	44	48	50	52	55	57	58	61
Sustainability Indices														
Ecological	70	71	71	72	73	73	74	74	75	76	78	78	78	78
Social	67	66	66	62	63	62	64	65	66	66	64	64	67	69

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	56	55	55	57	56	52	54	56	55	58	60	61	62	63	63
Economy	49	48	47	48	47	41	43	45	45	44	47	49	50	51	52
Social	65	66	67	67	67	67	68	69	69	86	85	84	85	85	85
Political	66	67	69	72	73	72	71	72	72	73	74	74	74	74	74
Sustainability Indices															
Ecological	78	78	78	78	79	79	79	80	80	81	82	82	82	82	82
Social	73	75	78	79	78	76	75	76	79	79	80	81	81	82	82

Development of real GDP per capita in Lithuania with and without progressing globalization



Average GDP growth per year and resident

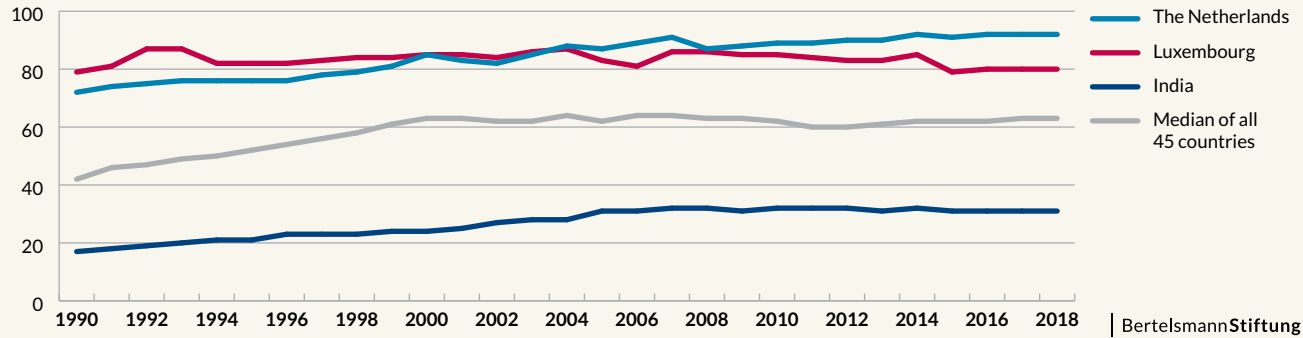
Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
30.	Lithuania	341
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

### 4.23 Luxembourg



Although Luxembourg's degree of globalization has not increased since 1990, the country still holds a top position in the globalization index. The country's political integration is relatively weak. In terms of per capita income gains, Luxembourg occupies a place in the front midfield.

Globalization index for Luxembourg as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



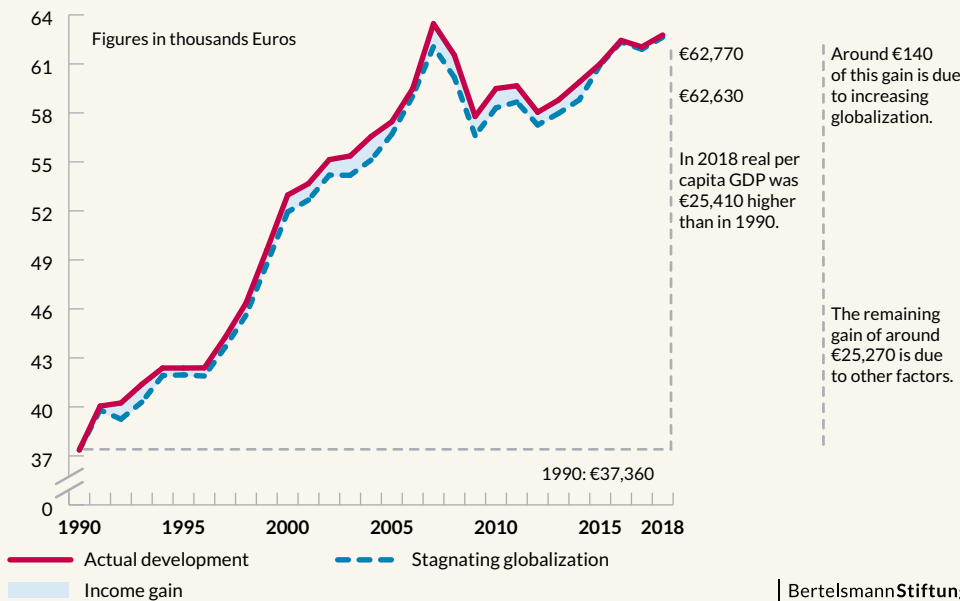
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	79	81	87	87	82	82	82	83	84	84	85	85	84	86
Economy	94	94	94	94	94	93	93	94	95	96	96	96	95	96
Social	73	75	76	78	78	80	81	82	82	83	84	81	84	85
Political	39	47	75	75	51	51	51	51	51	52	52	54	53	54
Sustainability Indices														
Ecological	63	62	62	62	64	67	67	69	70	70	69	68	67	66
Social	71	71	71	72	72	73	73	74	75	75	75	78	78	80

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	87	83	81	86	86	85	85	84	83	83	85	79	80	80	80
Economy	98	92	88	88	88	87	88	86	85	85	88	83	83	83	83
Social	85	86	86	86	86	86	85	85	85	84	83	83	83	83	83
Political	55	55	57	79	78	78	76	77	77	78	77	66	66	66	66
Sustainability Indices															
Ecological	65	65	65	66	67	67	67	67	68	70	71	71	71	71	71
Social	82	83	84	85	85	85	86	87	87	88	89	89	89	90	90

Development of real GDP per capita in Luxembourg with and without progressing globalization



Average GDP growth per year and resident

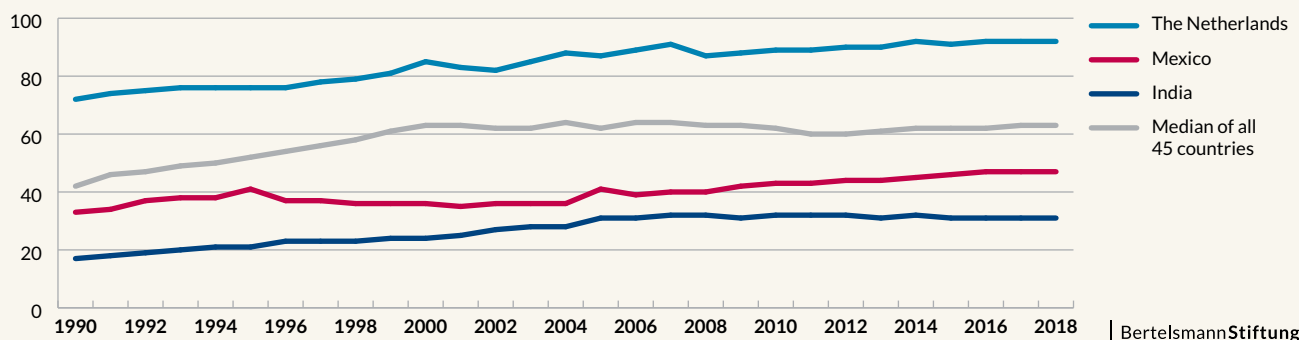
Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
15.	<b>Luxembourg</b>	<b>788</b>
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

## 4.24 Mexico



Mexico occupies one of the lower ranks in the ranking of the globalization index. Although the country experienced a globalization surge from 2004 to 2015, its per capita income gains are rather low due to the late increase of global integration.

Globalization index for Mexico as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



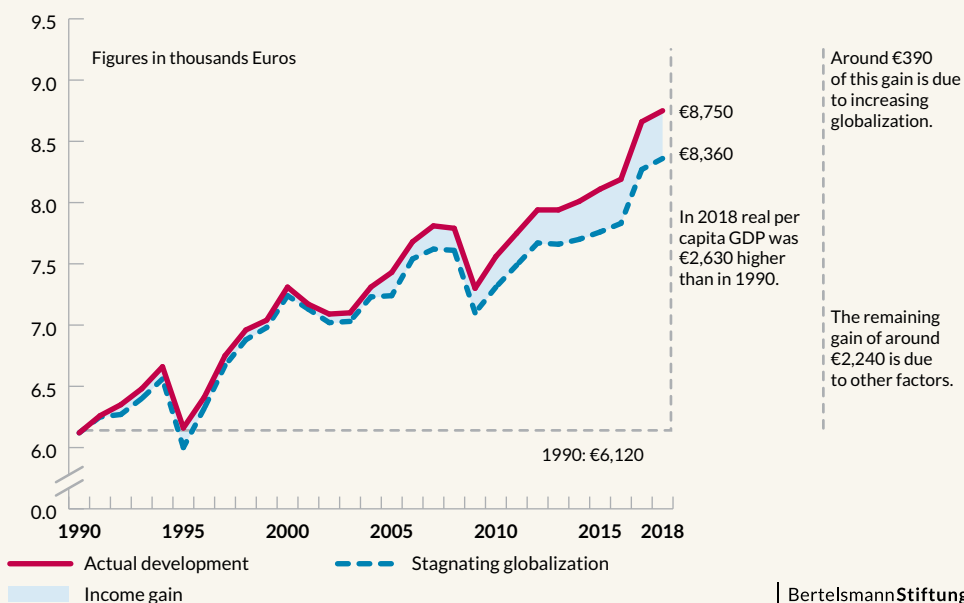
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	33	34	37	38	38	41	37	37	36	36	36	35	36	36
Economy	26	23	22	22	22	27	26	24	23	21	21	18	20	20
Social	37	38	41	41	42	44	45	47	47	48	50	50	52	51
Political	52	61	81	81	82	83	65	65	65	66	66	67	67	68
Sustainability Indices														
Ecological	71	71	71	71	71	71	71	71	70	70	70	70	70	69
Social	51	54	54	53	55	54	56	56	59	60	60	61	62	64

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	36	41	39	40	40	42	43	43	44	44	45	46	47	47	47
Economy	21	29	25	27	27	28	31	31	32	32	35	34	35	35	35
Social	51	52	53	51	51	53	52	52	51	51	51	51	50	50	50
Political	67	67	67	69	68	70	70	70	70	70	69	80	80	80	80
Sustainability Indices															
Ecological	69	69	69	69	69	69	69	69	69	69	70	70	70	70	70
Social	64	65	65	65	66	67	67	68	72	71	73	76	77	75	80

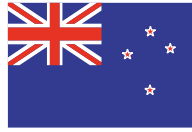
Development of real GDP per capita in Mexico with and without progressing globalization



Average GDP growth per year and resident

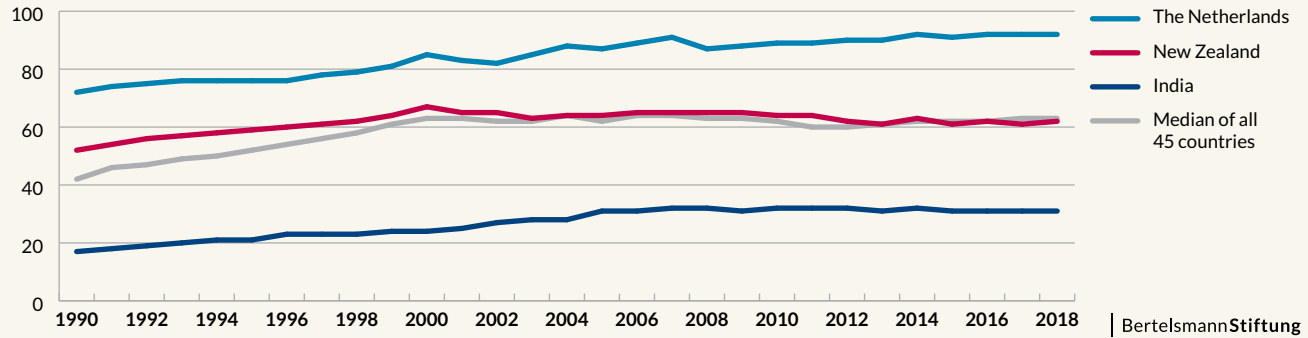
Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
38.	Mexico	173
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

### 4.25 New Zealand



After an initial globalization surge, New Zealand's networking has hardly changed since 2000. The country holds a middle position in the globalization index and in per capita income gains.

Globalization index for New Zealand as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



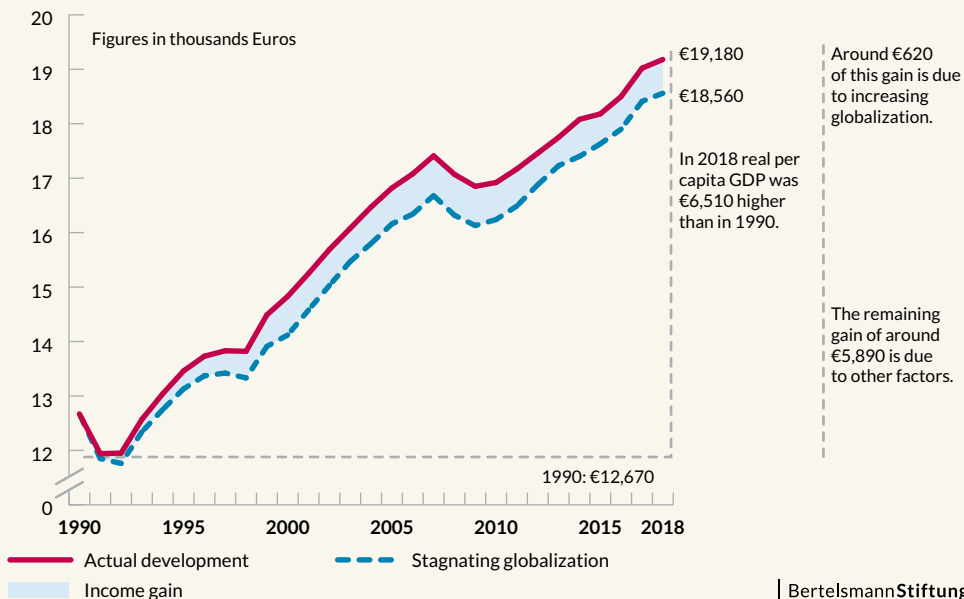
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	52	54	56	57	58	59	60	61	62	64	67	65	65	63
Economy	45	47	49	49	50	50	51	52	55	56	59	56	55	54
Social	62	62	63	65	69	70	71	72	74	77	78	78	78	78
Political	62	65	71	74	74	76	74	74	72	75	80	80	79	76
Sustainability Indices														
Ecological	77	77	77	77	77	77	77	76	76	76	76	75	76	76
Social	68	68	68	69	70	70	71	73	72	75	76	78	78	78

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	64	64	65	65	65	65	64	64	62	61	63	61	62	61	62
Economy	56	55	57	56	57	56	54	55	51	49	53	49	50	50	50
Social	78	78	78	78	78	77	77	77	77	77	77	77	77	77	77
Political	76	76	76	79	79	80	80	79	79	79	80	80	81	81	81
Sustainability Indices															
Ecological	76	76	76	76	76	76	77	77	76	76	76	76	76	76	76
Social	79	80	81	81	82	83	83	83	83	84	84	85	85	86	87

Development of real GDP per capita in New Zealand with and without progressing globalization



Average GDP growth per year and resident

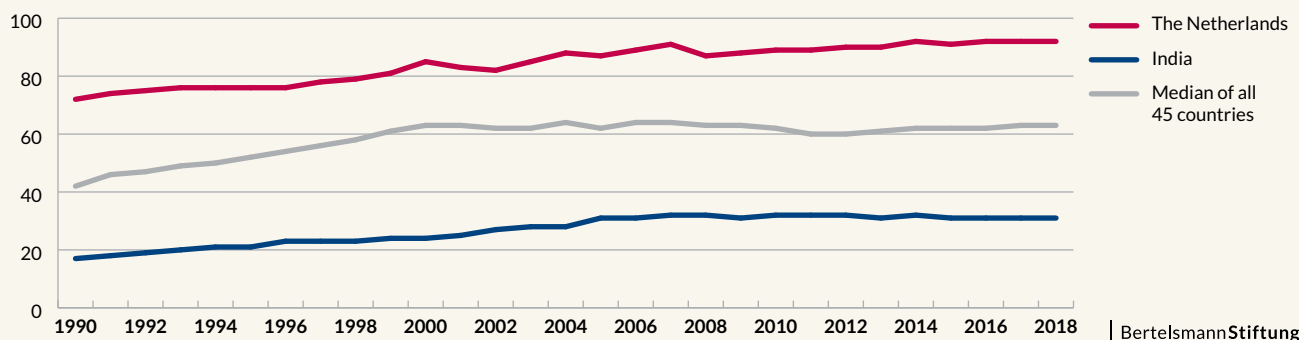
Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
22.	<b>New Zealand</b>	<b>551</b>
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

## 4.26 Netherlands



The Netherlands is the most globalized economy in the report. All areas of the country's society are closely interwoven with the world. The high starting level of the Netherlands leads to high per capita income gains.

Globalization index for the Netherlands as compared to India (lowest value in 2018)



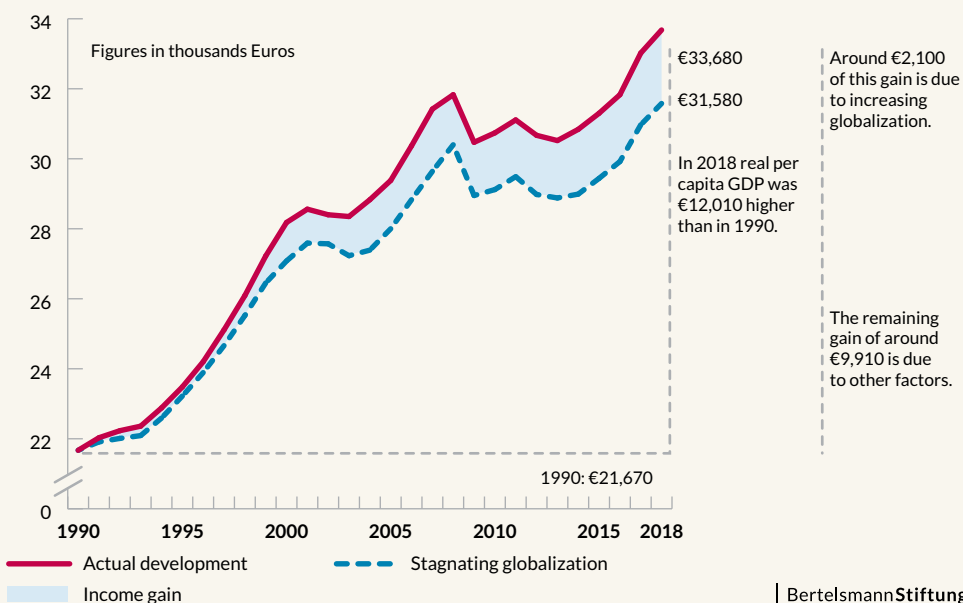
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	72	74	75	76	76	76	76	78	79	81	85	83	82	85
Economy	66	67	66	67	67	65	67	70	72	73	79	76	74	79
Social	80	82	85	85	86	87	87	87	89	93	93	93	93	94
Political	82	88	94	95	95	96	92	92	92	94	95	96	93	93
Sustainability Indices														
Ecological	67	66	67	67	67	67	66	67	66	66	66	66	66	65
Social	73	73	74	74	73	75	76	77	79	82	83	83	84	85

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	88	87	89	91	87	88	89	89	90	90	92	91	92	92	92
Economy	85	84	85	87	81	84	85	85	86	85	88	88	88	89	89
Social	94	95	95	95	96	95	96	97	97	97	97	97	97	97	97
Political	92	91	93	96	95	94	94	93	94	94	97	97	97	97	97
Sustainability Indices															
Ecological	65	66	66	65	65	66	65	66	66	66	67	67	67	67	67
Social	85	87	88	89	90	90	90	91	90	90	89	89	89	89	90

Development of real GDP per capita in the Netherlands with and without progressing globalization



Average GDP growth per year and resident

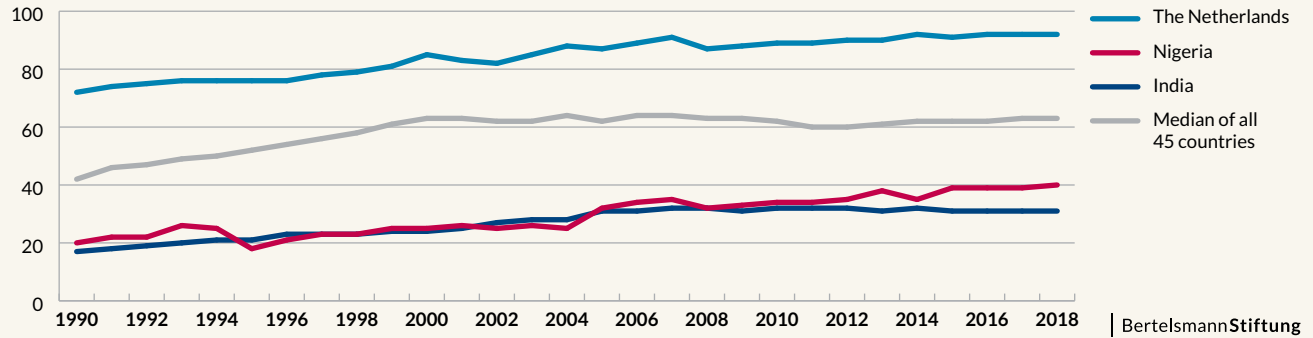
Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
6.	<b>The Netherlands</b>	<b>1,167</b>
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

## 4.27 Nigeria



Nigeria is one of the least globalized economies in the report. Since 2004, the country's economy has been opening up continuously. However, it is still not very open by international comparison. The per capita income gains from globalization are accordingly low.

Globalization index for Nigeria as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



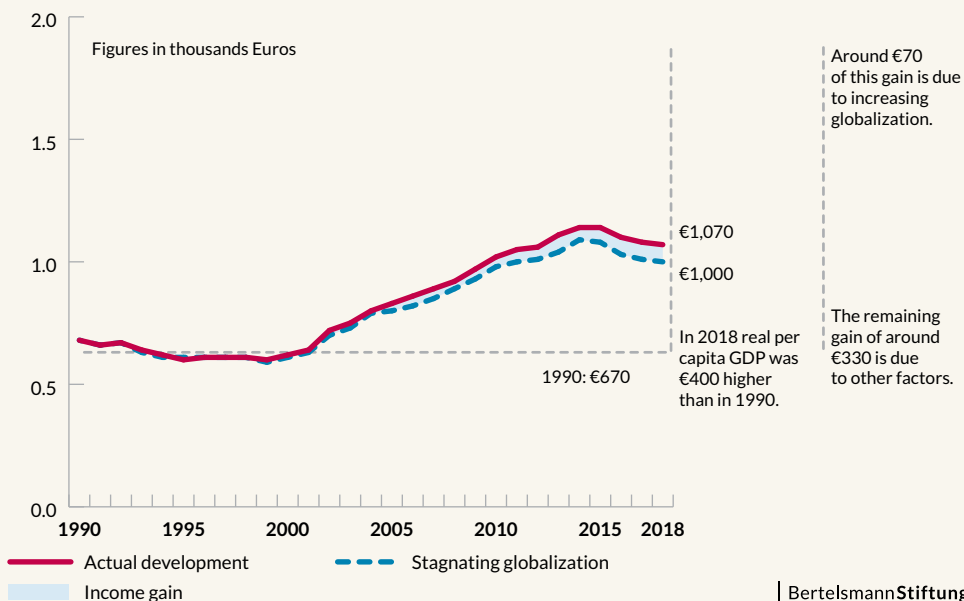
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	20	22	22	26	25	18	21	23	23	25	25	26	25	26
Economy	10	11	11	17	15	4	7	12	10	13	12	12	11	12
Social	7	8	8	7	5	4	5	5	9	12	11	12	14	16
Political	63	67	70	72	74	74	75	76	76	77	79	80	79	81
Sustainability Indices														
Ecological	83	83	83	83	84	84	84	84	84	84	83	83	83	83
Social	22	23	21	22	22	22	23	22	23	22	22	23	24	27

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	25	32	34	35	32	33	34	34	35	38	35	39	39	39	40
Economy	8	19	22	21	15	15	16	16	16	21	16	22	24	23	25
Social	19	22	24	26	30	36	38	39	40	40	41	40	38	39	39
Political	81	82	83	83	83	84	84	85	86	85	85	86	86	85	85
Sustainability Indices															
Ecological	83	84	85	85	85	86	86	87	86	87	87	83	83	83	83
Social	28	29	30	29	32	34	35	35	34	35	35	37	38	41	41

Development of real GDP per capita in Nigeria with and without progressing globalization



Average GDP growth per year and resident

Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

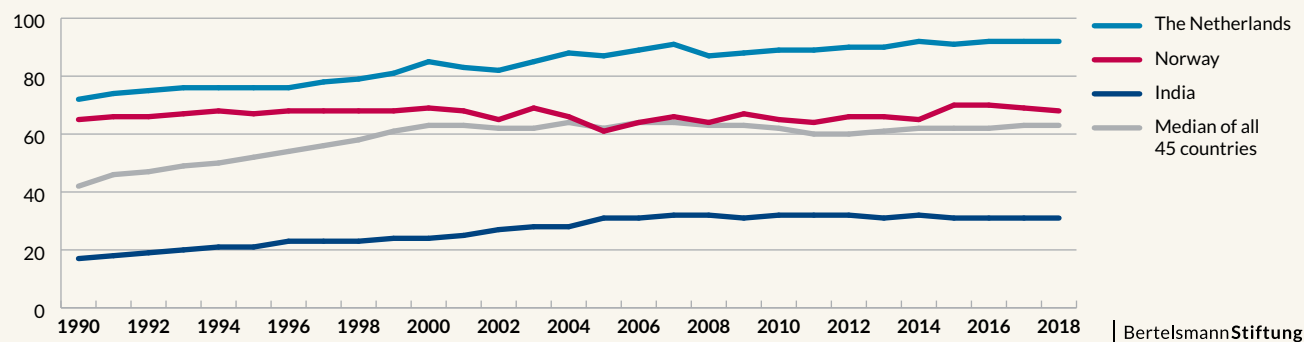


## 4.28 Norway



Norway ranks in the upper midfield in the globalization index. The country has hardly expanded its worldwide network since 1990. An increase in social and political globalization was offset by a loss of economic globalization. The per capita income gains are accordingly low.

Globalization index for Norway as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



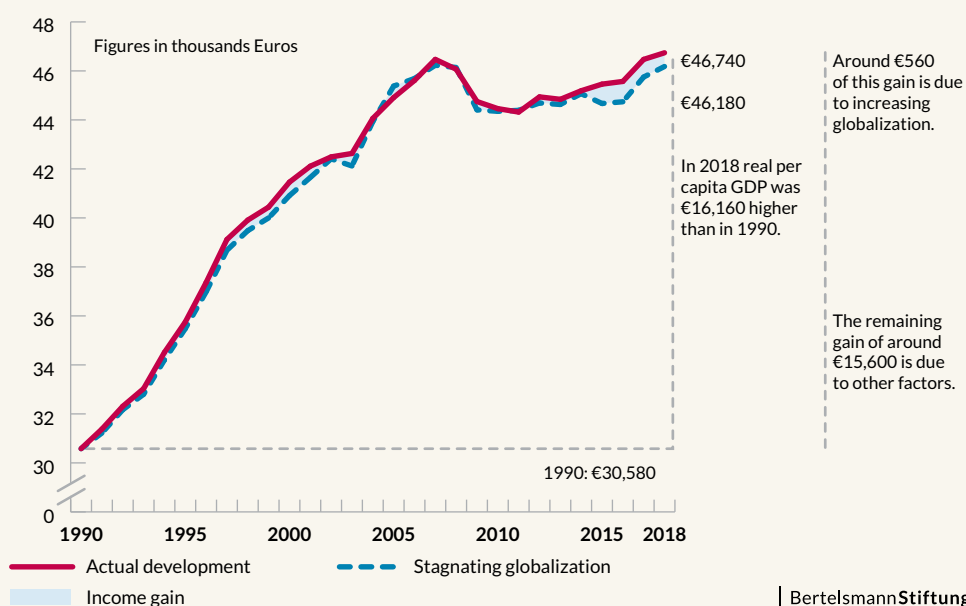
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	65	66	66	67	68	67	68	68	68	68	69	68	65	69
Economy	57	57	55	56	56	55	55	56	56	55	56	54	49	55
Social	75	76	77	78	79	80	83	84	84	87	89	90	91	90
Political	77	86	87	89	91	90	91	91	89	88	89	89	89	88
Sustainability Indices														
Ecological	87	87	87	87	87	87	87	87	86	86	86	86	87	85
Social	76	77	77	77	78	77	79	80	81	83	84	86	87	87

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	66	61	64	66	64	67	65	64	66	66	65	70	70	69	68
Economy	49	43	47	50	46	50	48	46	49	49	47	55	55	54	52
Social	92	89	90	91	91	91	91	91	91	91	92	91	92	92	92
Political	88	88	89	91	92	93	92	92	93	93	93	94	94	93	93
Sustainability Indices															
Ecological	85	86	85	85	84	84	83	85	85	84	86	86	86	86	86
Social	88	89	89	90	90	91	91	92	92	92	92	92	92	92	93

Development of real GDP per capita in Norway with and without progressing globalization



Average GDP growth per year and resident

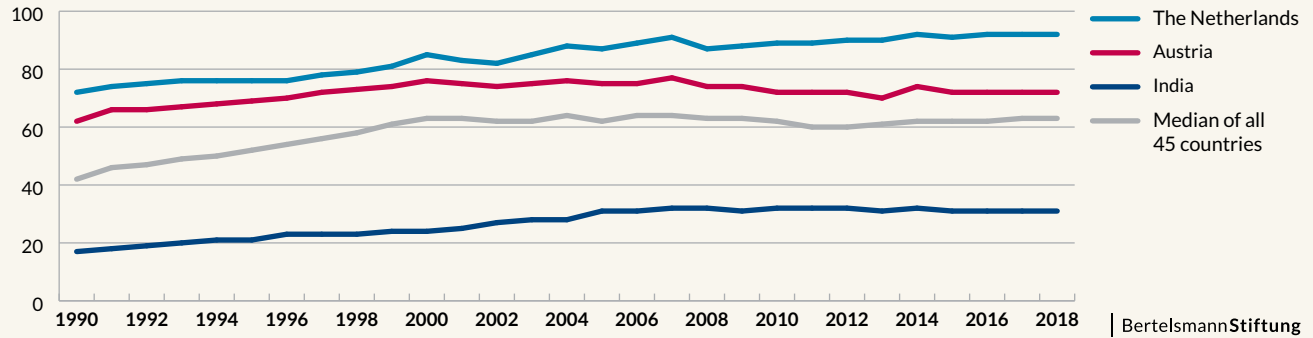
Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
33.	Norway	287
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

## 4.29 Austria



Austria performs well in the ranking of the globalization index. However, the level of integration it achieved in 2007 could not be maintained. Thanks to the economic opening in the 1990s, the country achieves good per capita income gains by globalization.

Globalization index for Austria as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



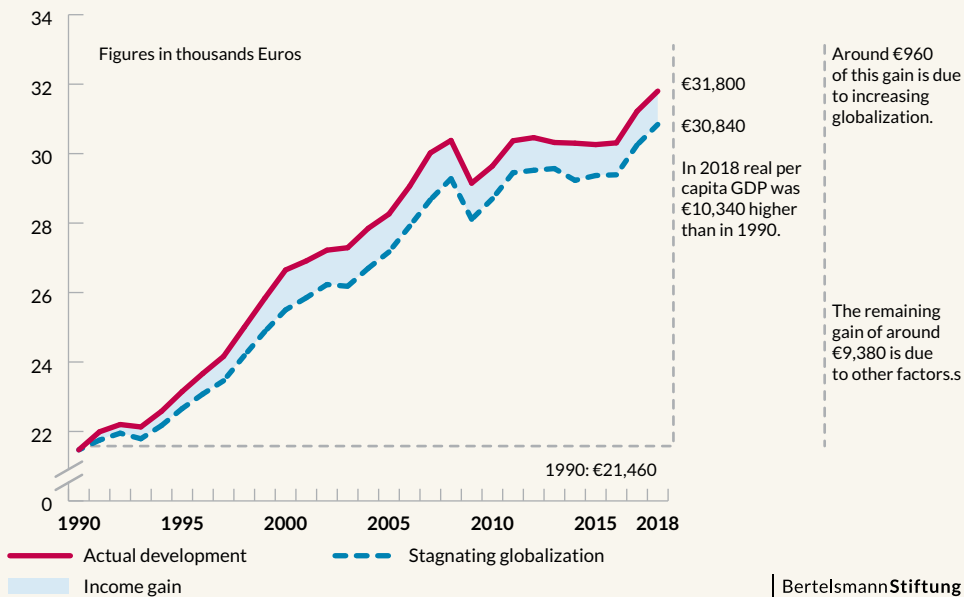
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	62	66	66	67	68	69	70	72	73	74	76	75	74	75
Economy	49	50	49	50	51	52	53	56	57	59	62	60	59	61
Social	86	88	89	90	91	92	94	94	94	96	97	97	95	96
Political	80	91	93	95	96	97	97	97	98	98	98	98	98	98
Sustainability Indices														
Ecological	77	77	78	78	78	78	77	77	77	78	78	77	77	76
Social	69	69	70	69	70	70	73	74	73	73	76	77	77	79

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	76	75	75	77	74	74	72	72	72	70	74	72	72	72	72
Economy	62	60	60	62	58	57	56	55	55	52	58	55	56	56	56
Social	96	97	97	98	98	98	98	98	98	98	97	96	96	96	96
Political	97	97	98	98	98	98	97	98	98	98	96	97	97	97	97
Sustainability Indices															
Ecological	76	76	77	78	78	79	78	79	80	80	81	80	80	80	80
Social	80	81	82	83	83	82	83	84	85	87	87	87	87	88	89

Development of real GDP per capita in Austria with and without progressing globalization



Average GDP growth per year and resident

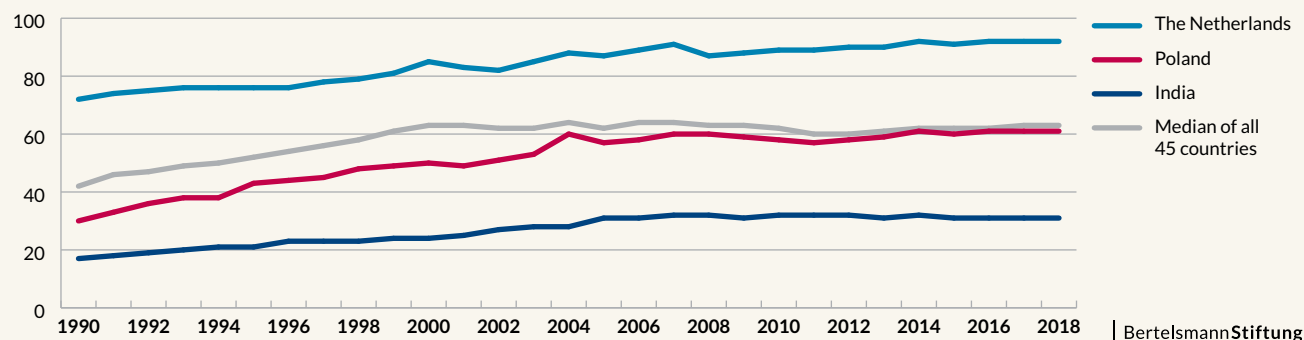
Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
12.	Austria	870
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

## 4.30 Poland



Poland's globalization is on the international average. Until its accession to the EU in 2004, the country continuously expanded its networks until its globalization index stagnated. Its per capita income gains from globalization are moderate.

Globalization index for Poland as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



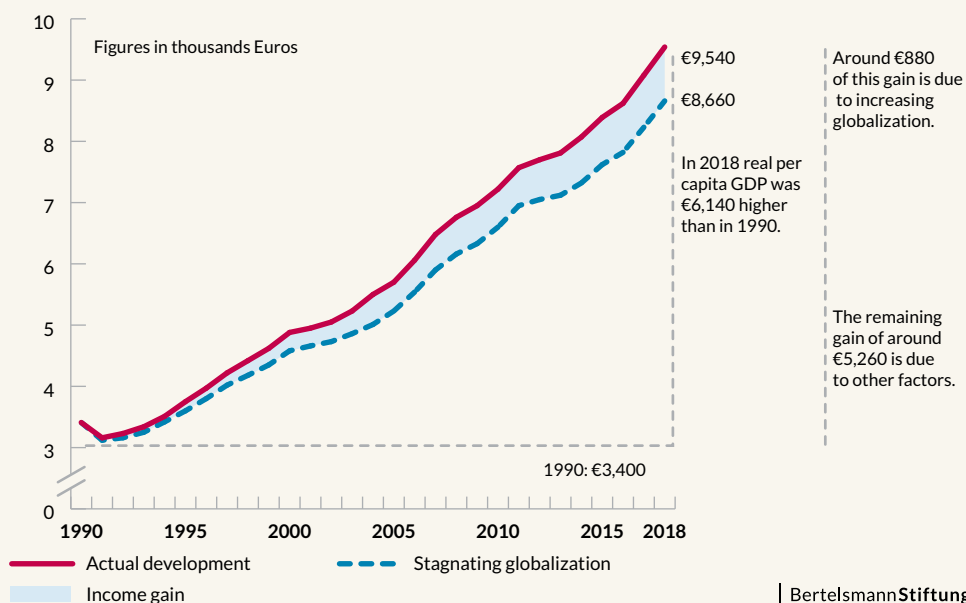
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	30	33	36	38	38	43	44	45	48	49	50	49	51	53
Economy	16	14	14	12	11	18	19	20	23	25	28	25	28	32
Social	36	51	65	67	67	71	73	75	78	78	76	76	76	77
Political	67	71	73	84	88	89	90	91	90	91	92	92	92	93
Sustainability Indices														
Ecological	62	63	63	64	64	64	64	65	66	67	68	68	68	68
Social	64	64	64	64	64	65	66	67	68	68	67	68	69	70

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	60	57	58	60	60	59	58	57	58	59	61	60	61	61	61
Economy	42	37	37	41	40	40	40	38	39	41	43	43	43	44	44
Social	81	81	83	82	83	82	83	83	83	83	84	85	84	84	84
Political	93	93	94	95	95	95	90	90	89	90	89	90	90	90	90
Sustainability Indices															
Ecological	68	69	68	69	69	70	69	70	71	71	72	72	72	72	72
Social	71	73	75	77	79	79	79	80	80	80	81	83	84	85	86

Development of real GDP per capita in Poland with and without progressing globalization



Average GDP growth per year and resident

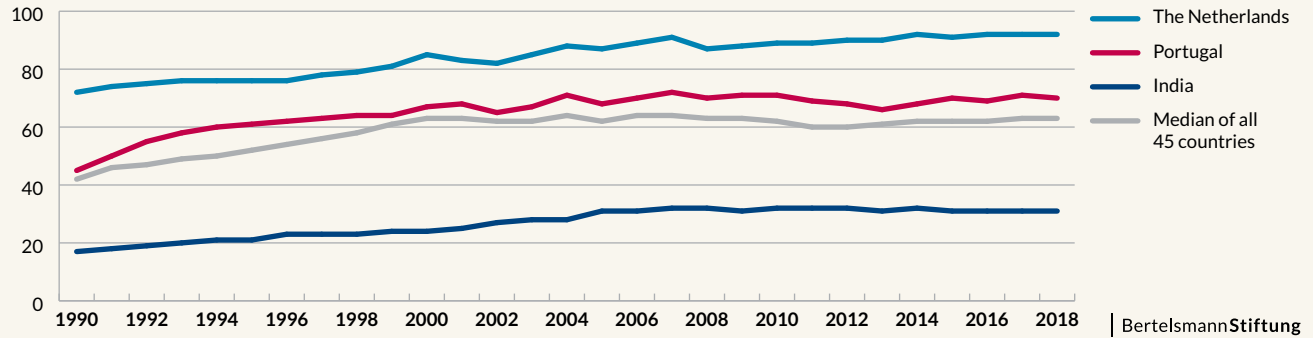
Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
27.	Poland	445
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

### 4.31 Portugal



By 2007, Portugal had opened up in all areas of society. The country is placed well in the globalization index as a result. Since then, Portugal's integration has stagnated. Thanks to its early opening, the country does well in terms of per capita income gains.

Globalization index for Portugal as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



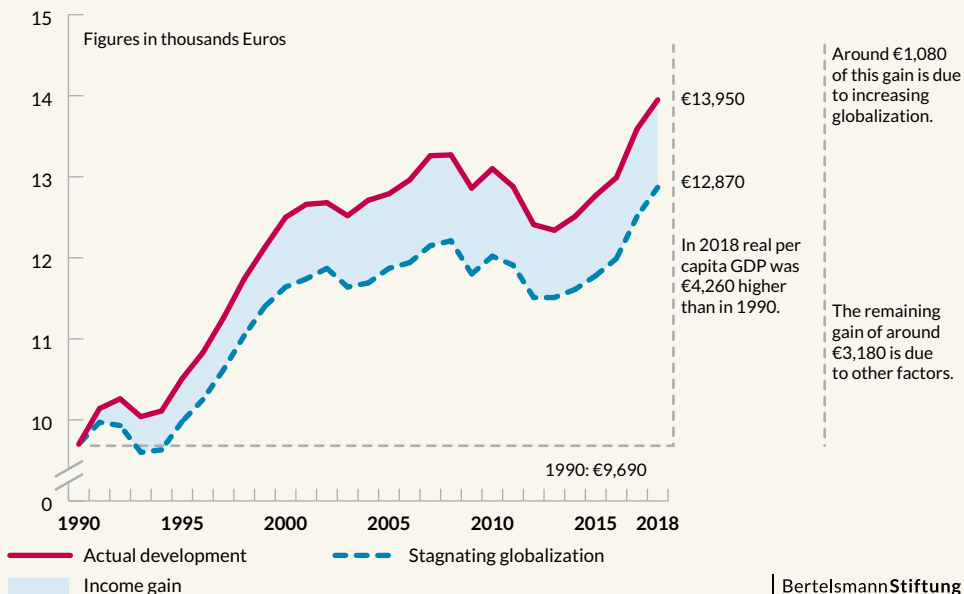
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	45	50	55	58	60	61	62	63	64	64	67	68	65	67
Economy	44	44	44	47	49	50	51	52	53	53	56	57	53	56
Social	38	56	60	62	63	66	67	69	70	72	73	73	73	73
Political	53	62	83	88	89	88	90	90	90	89	93	94	93	94
Sustainability Indices														
Ecological	79	78	77	78	78	77	78	77	77	75	76	76	75	76
Social	67	69	69	69	68	68	69	70	71	73	72	73	74	75

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	71	68	70	72	70	71	71	69	68	66	68	70	69	71	70
Economy	57	53	57	58	56	57	57	54	53	51	54	56	56	56	55
Social	90	90	90	91	90	90	90	88	88	88	88	88	89	90	90
Political	92	90	91	95	95	95	95	95	94	89	91	91	91	94	94
Sustainability Indices															
Ecological	76	75	76	77	77	78	79	79	78	79	80	79	79	79	79
Social	76	76	77	79	80	79	80	80	79	79	81	83	84	85	86

Development of real GDP per capita in Portugal with and without progressing globalization



Average GDP growth per year and resident

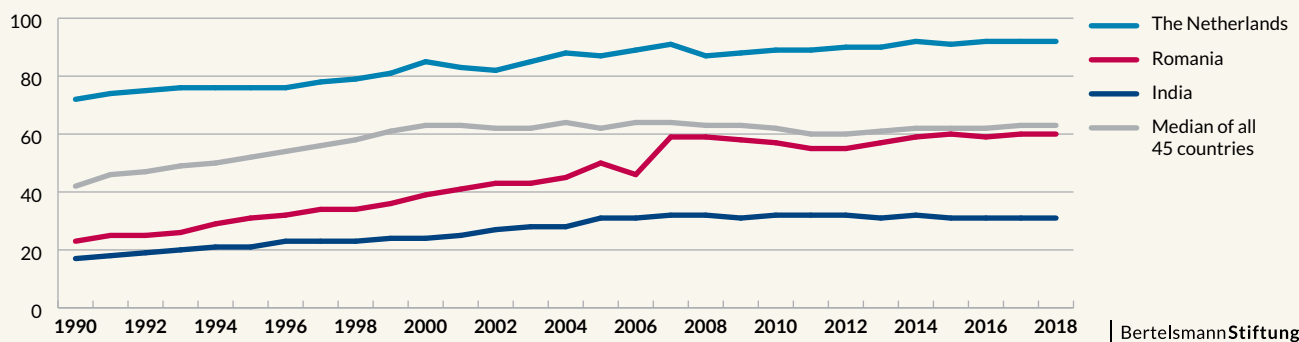
Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
13.	Portugal	825
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

### 4.32 Romania



Romania was barely more globalized than India in 1990. Afterwards, its globalization index rose steeply until 2007, before stagnating slightly below the international average. Due to its low starting levels, Romania's per capita income gains remain low.

Globalization index for Romania as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



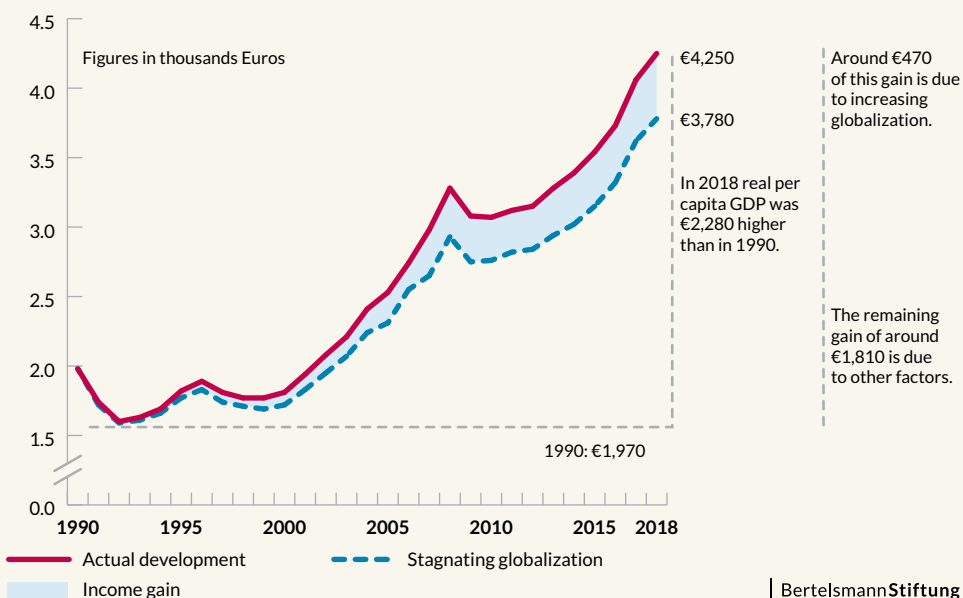
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	23	25	25	26	29	31	32	34	34	36	39	41	43	43
Economy	18	15	15	13	14	13	13	14	14	17	20	23	24	25
Social	17	17	16	16	19	34	38	42	43	45	51	48	52	52
Political	43	65	64	73	81	84	85	86	85	85	86	87	89	89
Sustainability Indices														
Ecological	63	65	66	67	68	68	69	71	73	74	74	73	73	74
Social	58	58	58	59	59	59	60	62	62	63	63	64	64	65

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	45	50	46	59	59	58	57	55	55	57	59	60	59	60	60
Economy	28	36	28	44	43	43	41	38	38	41	45	46	46	46	46
Social	52	52	54	70	71	71	69	69	70	70	70	70	70	70	70
Political	90	90	91	93	92	91	91	91	90	90	90	90	90	90	90
Sustainability Indices															
Ecological	75	75	75	75	76	77	78	77	77	79	79	79	79	79	79
Social	66	67	67	68	70	70	70	70	71	72	72	72	73	75	77

Development of real GDP per capita in Romania with and without progressing globalization



Average GDP growth per year and resident

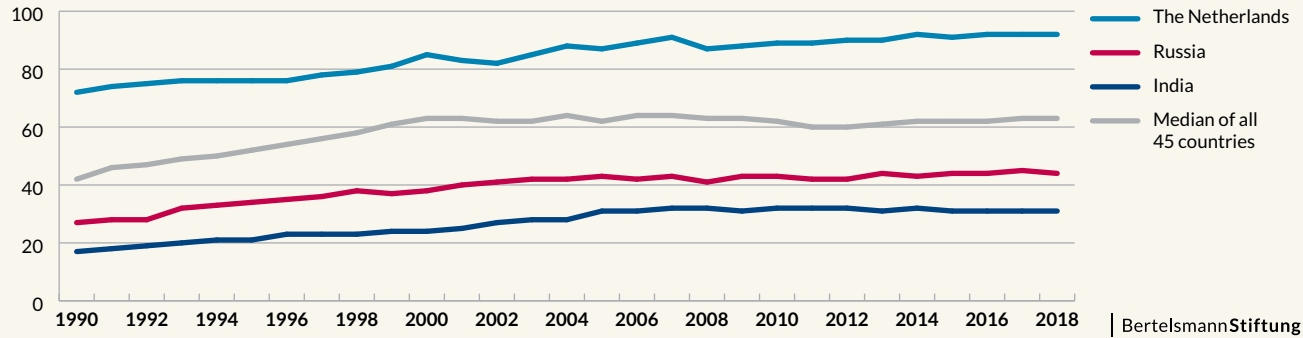
Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
35.	Romania	207
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

### 4.33 Russia



Russia holds a rear rank in the globalization index. After a slight opening in the 1990s, international integration has stagnated since 2002. Per capita income gains remain low for this reason and due to the low starting level of per capita income.

Globalization index for Russia as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



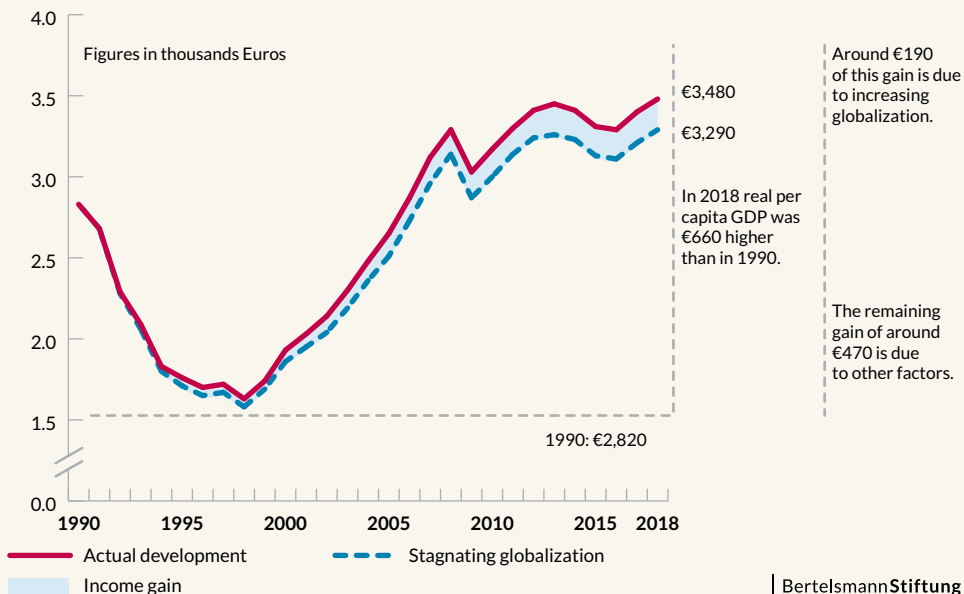
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	27	28	28	32	33	34	35	36	38	37	38	40	41	42
Economy	11	11	11	11	11	13	13	13	16	15	11	13	15	16
Social	38	38	38	43	45	47	49	50	53	51	66	70	71	71
Political	67	68	71	83	85	87	89	90	88	89	90	91	92	92
Sustainability Indices														
Ecological	61	61	61	62	62	63	63	64	63	64	64	65	65	65
Social	60	60	60	61	60	60	61	61	61	61	62	64	65	65

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	42	43	42	43	41	43	43	42	42	44	43	44	44	45	44
Economy	16	17	16	17	14	17	18	17	17	19	19	20	21	21	20
Social	72	71	72	71	71	71	67	67	68	68	68	67	67	67	67
Political	92	92	92	93	93	93	93	93	92	92	92	92	93	93	93
Sustainability Indices															
Ecological	66	66	66	67	66	67	67	66	66	67	67	67	68	68	68
Social	67	68	68	71	71	70	72	73	75	76	77	77	77	78	79

Development of real GDP per capita in Russia with and without progressing globalization



Average GDP growth per year and resident

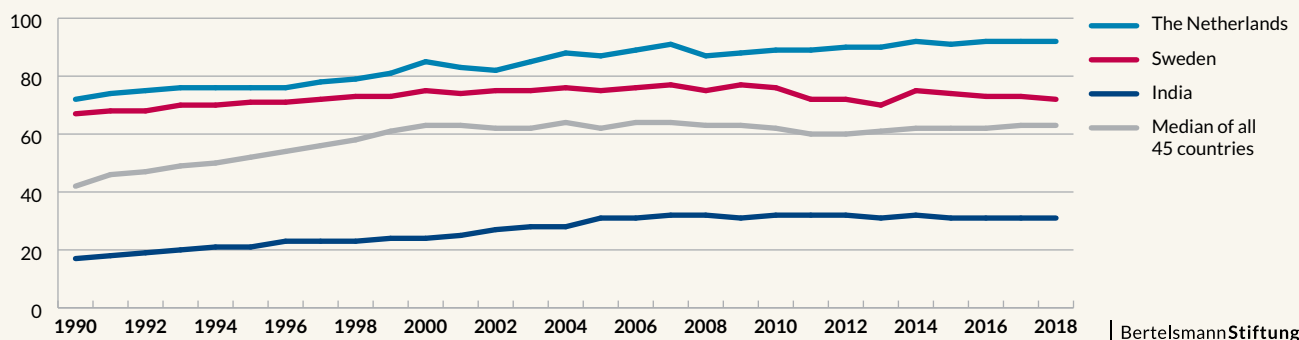
Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

### 4.34 Sweden



Sweden is one of the leaders in the globalization index ranking. The country occupied top positions in all areas of globalization as early as in 1990. It has been able to slightly increase its global integration since then. The country's per capita income gains are in the front midfield.

Globalization index for Sweden as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



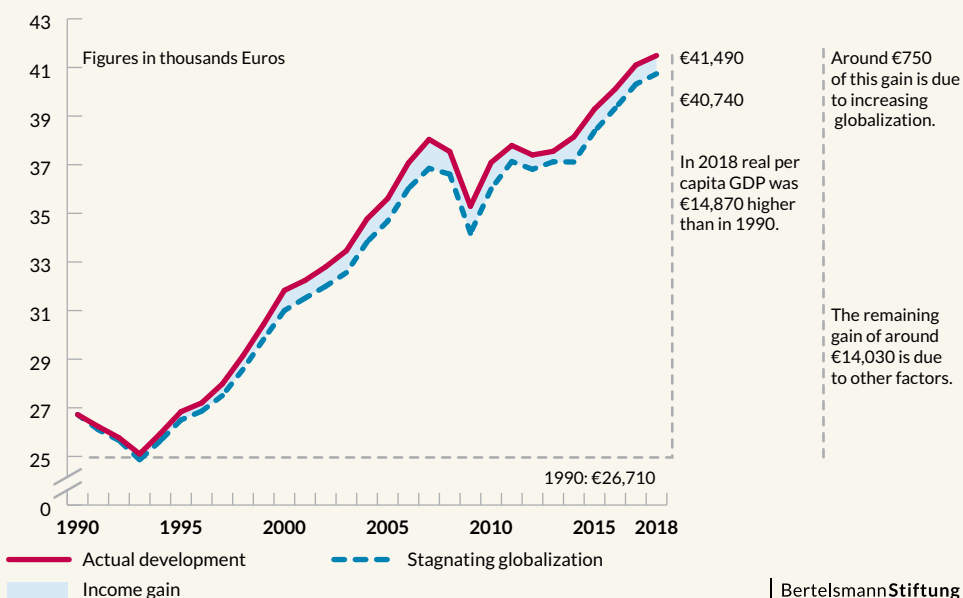
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	67	68	68	70	70	71	71	72	73	73	75	74	75	75
Economy	56	56	55	57	57	58	57	59	59	60	63	61	62	63
Social	80	81	81	82	83	83	86	88	90	90	90	91	92	92
Political	85	94	94	95	98	98	96	97	97	96	97	97	96	97
Sustainability Indices														
Ecological	84	83	84	84	83	84	83	84	84	84	85	85	84	84
Social	79	79	79	77	78	78	78	80	81	83	84	86	89	90

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	76	75	76	77	75	77	76	72	72	70	75	74	73	73	72
Economy	63	62	63	65	62	66	65	58	58	55	63	61	59	59	59
Social	92	92	92	92	92	91	91	91	90	90	90	89	89	89	89
Political	98	98	98	97	97	96	96	96	96	96	97	98	98	98	98
Sustainability Indices															
Ecological	84	85	86	86	87	87	87	87	88	88	88	89	89	89	89
Social	91	91	92	91	92	92	91	92	92	91	91	91	91	91	92

Development of real GDP per capita in Sweden with and without progressing globalization



Average GDP growth per year and resident

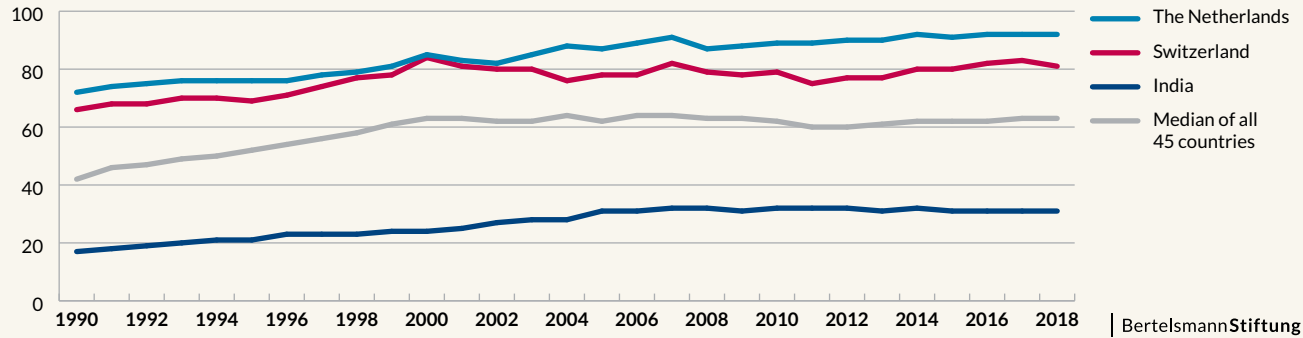
Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
19.	Sweden	699
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

### 4.35 Switzerland



Hardly any other economy is as well globalized as Switzerland. Starting out in a good position, the country opened up even further in the 1990s. Because of this and due to its economic starting position, the country holds a top position in terms of per capita income gains. Only Japan was able to benefit more from globalization.

Globalization index for Switzerland as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



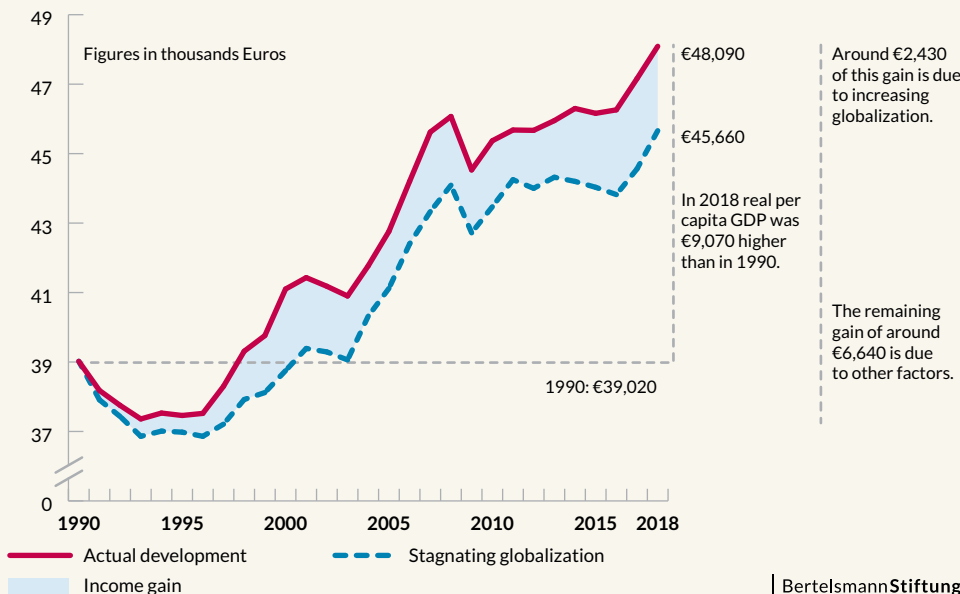
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	66	68	68	70	70	69	71	74	77	78	84	81	80	80
Economy	55	55	55	55	55	55	57	62	65	67	76	72	70	69
Social	87	89	89	90	91	92	93	94	96	100	98	98	99	99
Political	74	85	87	91	91	91	92	92	92	91	92	92	92	92
Sustainability Indices														
Ecological	79	79	79	79	80	80	80	80	79	80	80	80	80	80
Social	74	73	73	73	73	73	73	74	76	77	79	80	81	82

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	76	78	78	82	79	78	79	75	77	77	80	80	82	83	81
Economy	64	66	67	72	68	67	68	62	65	64	69	70	73	75	72
Social	99	99	98	99	99	98	98	98	98	97	97	97	96	96	96
Political	92	92	93	93	93	94	93	93	94	94	94	95	95	95	95
Sustainability Indices															
Ecological	80	80	80	81	81	81	81	81	82	81	82	82	83	83	83
Social	82	83	84	85	86	86	86	87	87	87	88	88	88	89	89

Development of real GDP per capita in Switzerland with and without progressing globalization



Average GDP growth per year and resident

Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

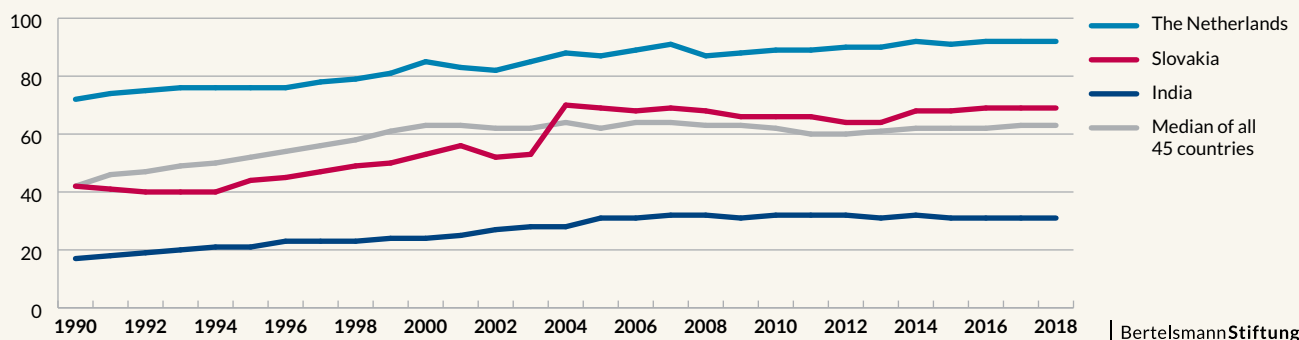


### 4.36 Slovakia



Slovakia is better internationally linked than the majority of the reporting countries. After opening up in the 1990s, the country's economy experienced an additional globalization surge with its accession to the EU. The country's per capita income gains generated by globalization are in the international midfield.

Globalization index for Slovakia as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



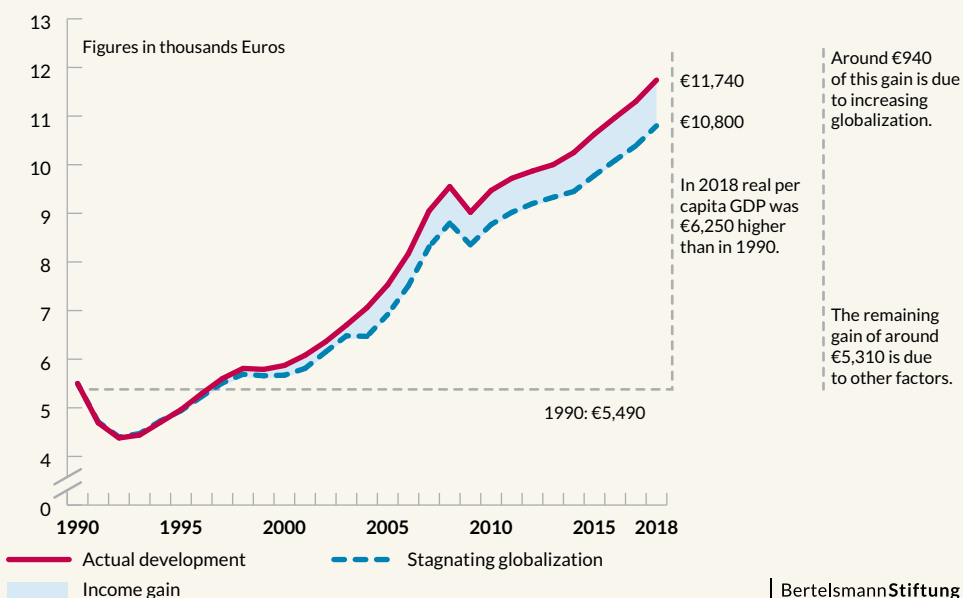
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	42	41	40	40	40	44	45	47	49	50	53	56	52	53
Economy	32	31	30	29	28	27	29	30	33	34	38	42	35	35
Social	56	56	56	56	59	73	76	78	81	81	82	81	82	82
Political	55	55	55	55	58	63	64	66	63	66	70	74	76	77
Sustainability Indices														
Ecological	67	67	67	68	69	69	69	70	70	70	71	71	71	71
Social	61	62	62	62	62	63	64	65	65	64	64	64	69	71

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	70	69	68	69	68	66	66	66	64	64	68	68	69	69	69
Economy	62	59	58	58	55	53	53	52	50	49	56	57	58	58	57
Social	83	87	87	88	89	89	88	88	88	88	87	87	87	88	88
Political	79	80	82	82	84	83	84	84	84	85	82	83	83	83	83
Sustainability Indices															
Ecological	72	72	72	73	73	74	74	74	75	75	76	76	76	76	76
Social	71	72	74	77	77	77	76	76	77	77	78	78	79	80	80

Development of real GDP per capita in Slovakia with and without progressing globalization



Average GDP growth per year and resident

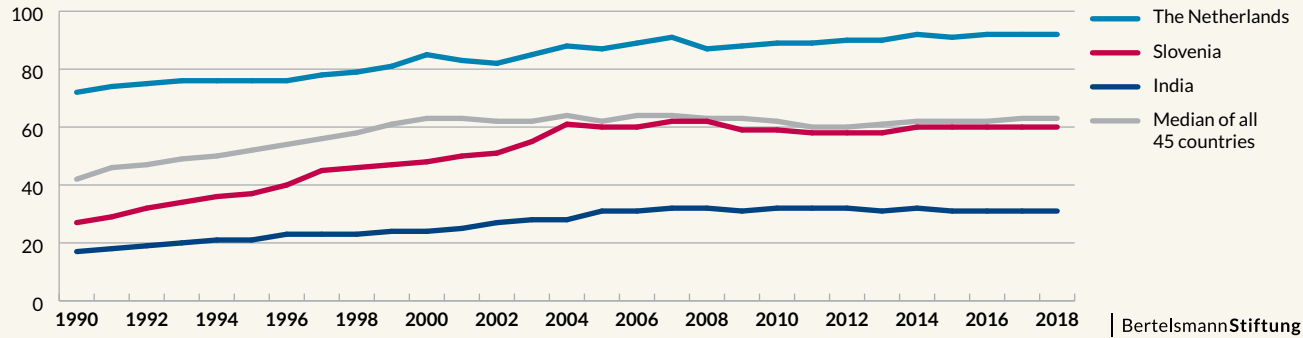
Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
28.	Slovakia	442
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

### 4.37 Slovenia



Slovenia opened up continually until it joined the EU in 2004. Since then, its globalization index has stagnated in the international midfield. The country's early opening and good per capita income starting level led to strong per capita income gains.

Globalization index for Slovenia as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



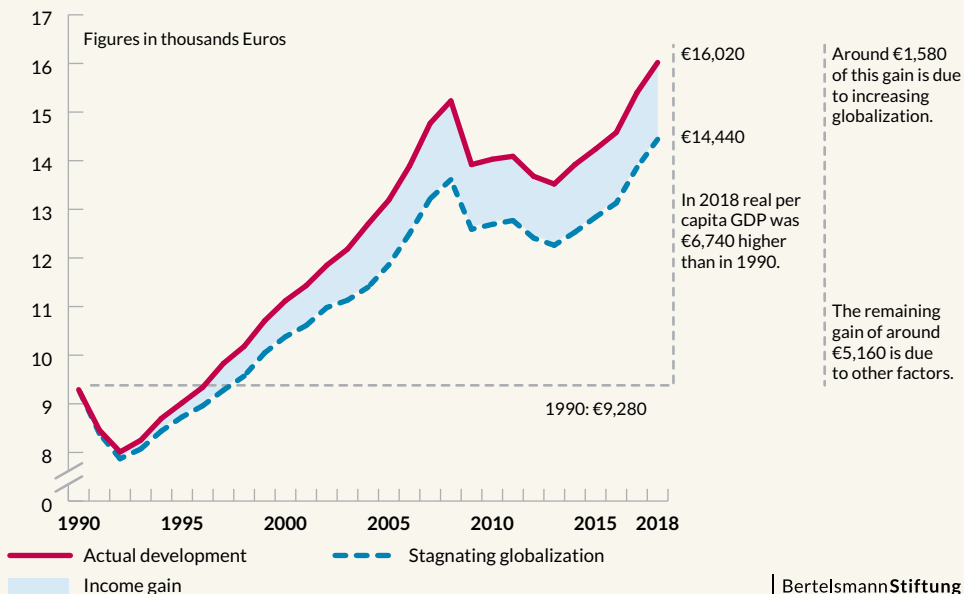
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	27	29	32	34	36	37	40	45	46	47	48	50	51	55
Economy	29	32	32	32	31	30	31	32	33	34	36	37	37	44
Social	45	45	45	57	61	62	71	72	71	71	69	72	72	72
Political	4	4	18	16	27	31	34	55	60	62	65	67	70	72
Sustainability Indices														
Ecological	75	75	75	74	74	74	74	73	74	74	76	75	75	75
Social	64	65	65	65	66	67	68	68	69	70	71	74	74	74

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	61	60	60	62	62	59	59	58	58	58	60	60	60	60	60
Economy	51	50	49	51	52	46	46	45	44	44	49	48	48	49	48
Social	76	75	76	76	77	76	76	76	76	76	75	75	75	74	74
Political	75	75	76	79	80	81	81	82	83	83	82	82	82	82	82
Sustainability Indices															
Ecological	75	75	75	75	75	76	77	76	77	78	78	78	78	78	78
Social	75	76	77	77	78	79	79	83	83	83	84	84	86	87	84

Development of real GDP per capita in Slovenia with and without progressing globalization



Average GDP growth per year and resident

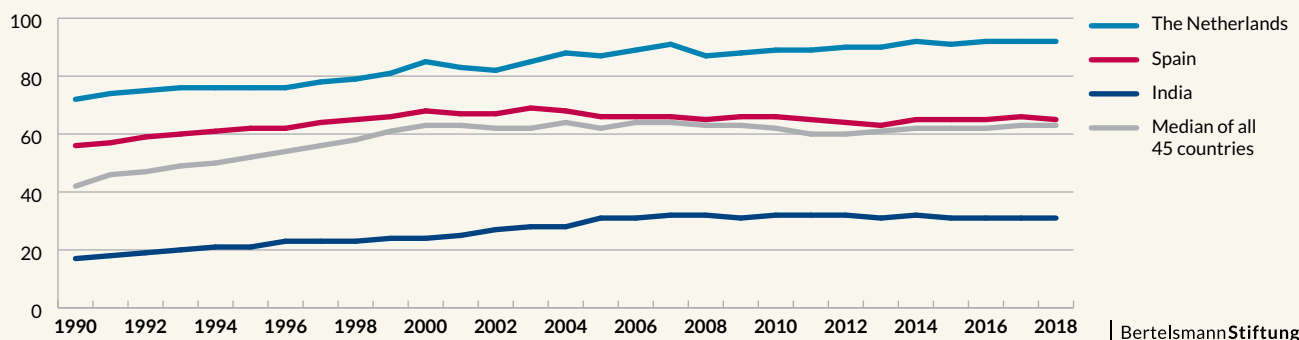
Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
9.	<b>Slovenia</b>	<b>989</b>
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

### 4.38 Spain



Globalization stagnated after a careful opening of Spain in the 1990s. The Spanish globalization index and per capita income gains from globalization accordingly are found in the international midfield.

Globalization index for Spain as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



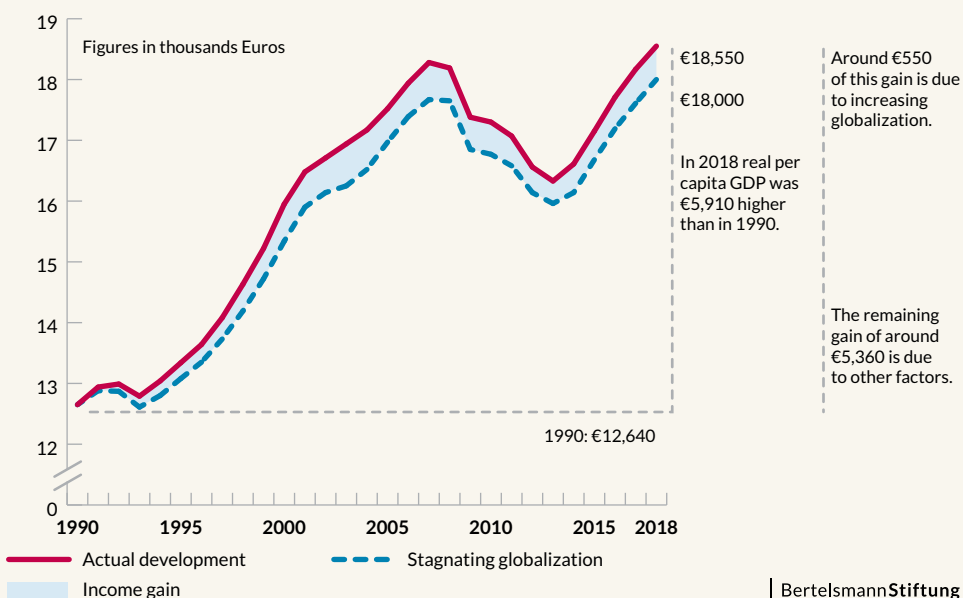
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	56	57	59	60	61	62	62	64	65	66	68	67	67	69
Economy	44	44	45	46	46	47	48	49	51	52	54	52	52	55
Social	66	68	70	71	73	75	78	79	83	84	85	86	87	88
Political	81	86	90	93	95	95	91	91	92	92	92	93	92	92
Sustainability Indices														
Ecological	73	73	73	73	73	73	73	73	73	72	72	72	72	72
Social	66	65	65	64	64	65	66	67	68	69	73	75	75	78

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	68	66	66	66	65	66	66	65	64	63	65	65	65	66	65
Economy	53	49	48	49	46	47	47	46	45	44	47	46	47	48	47
Social	88	89	89	89	90	88	88	89	88	88	88	88	88	88	88
Political	92	94	95	97	97	97	97	97	97	97	96	97	97	97	97
Sustainability Indices															
Ecological	72	71	72	72	73	74	74	74	75	75	76	75	76	76	76
Social	80	81	82	83	83	81	80	80	79	78	81	82	83	85	85

Development of real GDP per capita in Spain with and without progressing globalization



Average GDP growth per year and resident

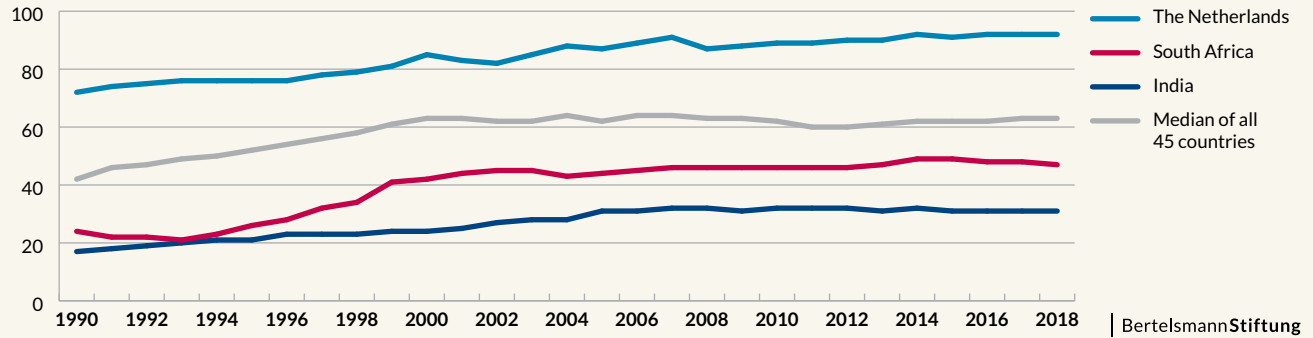
Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
25.	Spain	453
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

### 4.39 South Africa



Although South Africa experienced a strong globalization surge after the end of apartheid, it has not been able to expand its international integration since the turn of the millennium. The country holds a bottom position both in the globalization index and in per capita income gains.

Globalization index for South Africa as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



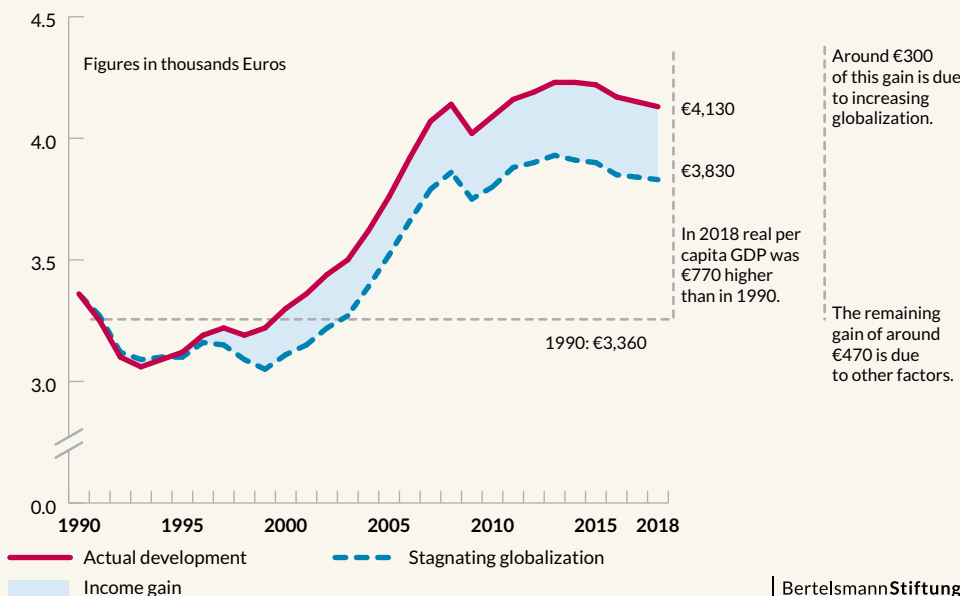
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	24	22	22	21	23	26	28	32	34	41	42	44	45	45
Economy	26	23	23	20	21	18	19	23	26	30	32	34	34	34
Social	21	21	22	24	26	39	41	41	43	43	44	45	44	43
Political	20	20	20	22	25	34	40	47	48	68	70	75	76	80
Sustainability Indices														
Ecological	64	63	65	64	64	63	63	63	63	64	64	65	65	63
Social	45	46	45	45	43	43	42	42	44	45	45	44	44	43

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	43	44	45	46	46	46	46	46	46	47	49	49	48	48	47
Economy	31	32	33	35	33	33	33	32	33	34	36	36	35	35	34
Social	43	43	43	43	44	45	46	46	46	46	47	47	47	47	47
Political	82	83	83	85	86	85	86	86	87	87	88	88	88	88	88
Sustainability Indices															
Ecological	62	64	63	63	62	62	63	64	64	64	63	64	64	64	64
Social	46	47	48	49	51	55	57	58	59	60	61	63	62	61	61

Development of real GDP per capita in South Africa with and without progressing globalization



Average GDP growth per year and resident

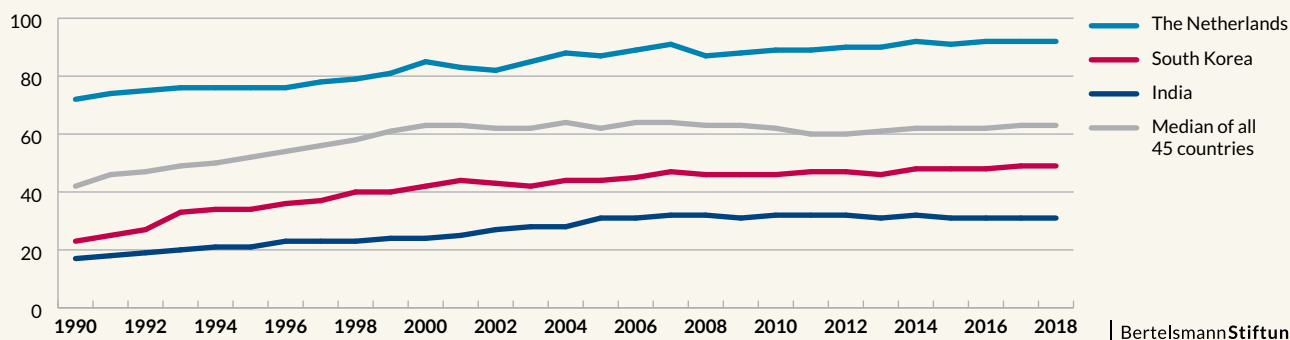
Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
36.	South Africa	195
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

## 4.40 South Korea



After a globalization surge in the early 1990s, South Korea's international integration slowed down. The country is now less connected than most of the reporting countries. Due to its early opening, it still generates good per capita income gains.

Globalization index for South Korea as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



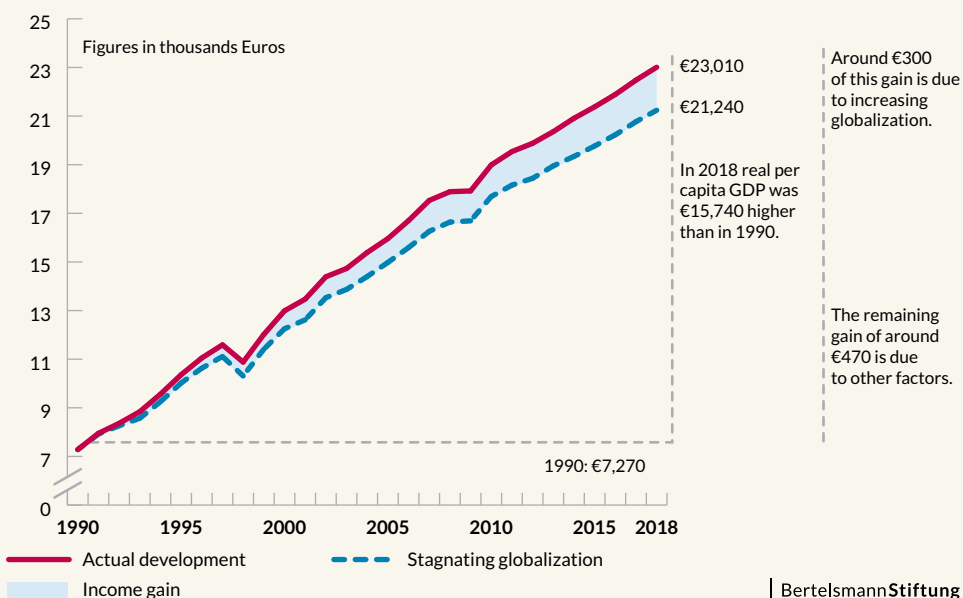
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	23	25	27	33	34	34	36	37	40	40	42	44	43	42
Economy	14	15	18	20	20	20	21	21	27	25	26	28	26	25
Social	34	36	39	41	42	43	45	47	47	49	52	53	54	54
Political	40	40	43	66	67	67	72	75	74	76	81	83	84	83
Sustainability Indices														
Ecological	66	66	65	64	64	64	63	63	63	63	62	62	62	62
Social	61	62	62	63	63	64	64	63	62	65	70	72	73	74

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	44	44	45	47	46	46	46	47	47	46	48	48	48	49	49
Economy	29	28	30	32	30	30	29	30	31	29	32	32	32	32	32
Social	54	53	52	53	53	52	53	53	53	53	53	55	55	55	55
Political	81	81	83	86	87	88	89	90	90	90	90	91	91	91	91
Sustainability Indices															
Ecological	62	62	62	62	62	62	61	61	61	61	62	62	62	62	62
Social	77	78	79	79	79	80	82	82	83	83	84	84	85	85	85

Development of real GDP per capita in South Korea with and without progressing globalization



Average GDP growth per year and resident

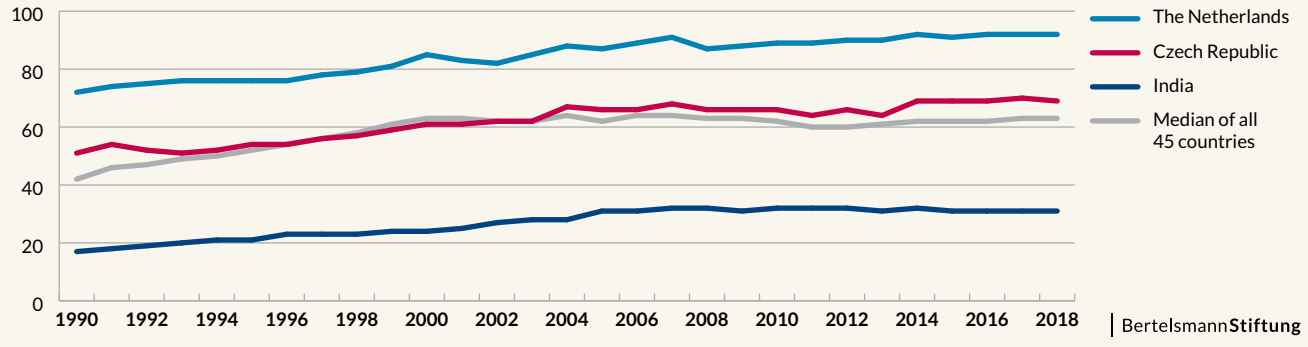
Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
10.	South Korea	969
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

### 4.41 Czech Republic



The Czech Republic ranks higher than most of the reporting countries in the globalization index. Already in 1990, the extent of the country's globalization was above average. Since then, its dynamics dropped below the international average. In terms of per capita income gains, the Czech Republic is in the lower midfield.

Globalization index for the Czech Republic as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



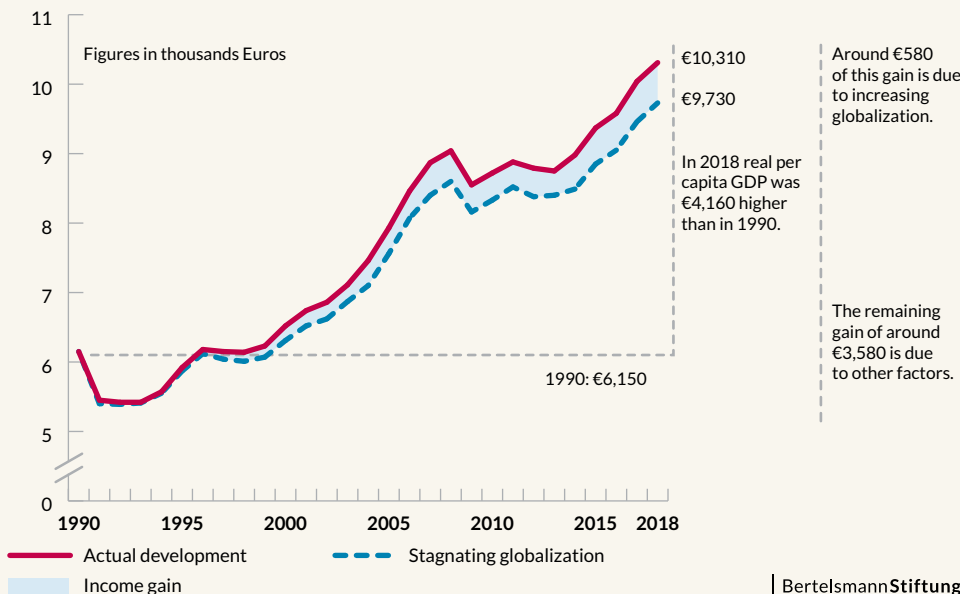
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	51	54	52	51	52	54	54	56	57	59	61	61	62	62
Economy	39	43	41	39	39	40	40	42	44	46	48	47	48	47
Social	69	69	69	69	72	74	77	80	81	81	81	82	83	84
Political	71	71	71	71	73	75	74	75	74	77	80	84	84	85
Sustainability Indices														
Ecological	64	64	64	65	66	66	67	66	67	68	67	68	68	68
Social	65	66	66	67	68	68	69	70	70	69	70	71	73	74

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	67	66	66	68	66	66	66	64	66	64	69	69	69	70	69
Economy	55	53	52	56	53	52	52	49	53	49	57	57	57	58	57
Social	84	85	86	86	88	87	86	86	86	87	87	87	87	87	87
Political	84	85	86	88	87	86	85	85	86	85	86	86	87	87	87
Sustainability Indices															
Ecological	69	69	69	69	70	71	71	72	72	73	74	74	74	74	74
Social	74	75	76	77	79	78	80	80	81	80	81	81	82	82	83

Development of real GDP per capita in the Czech Republic with and without progressing globalization



Average GDP growth per year and resident

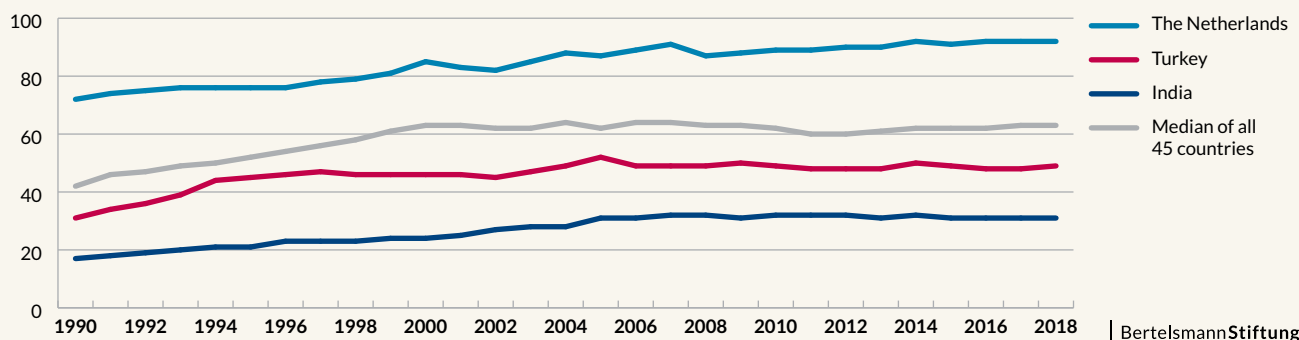
Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
32.	<b>Czech Republic</b>	<b>291</b>
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

## 4.42 Turkey



Due to Turkey's weak economic and social integration with other countries, its globalization index remains below that of most countries covered by the report. Its globalization has stagnated since 2005. Per-capita income gains are relatively low in spite of the country's early opening.

Globalization index for Turkey as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



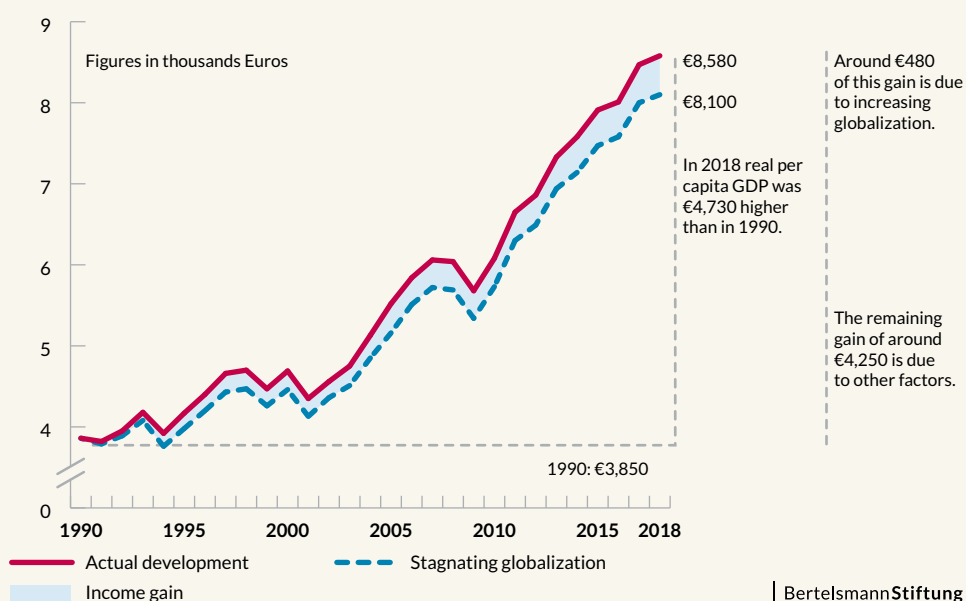
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	31	34	36	39	44	45	46	47	46	46	46	46	45	47
Economy	19	21	22	25	31	33	34	34	33	32	32	31	29	33
Social	31	31	38	38	41	42	45	47	47	47	49	50	48	48
Political	67	75	75	81	87	87	84	86	85	86	88	90	90	90
Sustainability Indices														
Ecological	74	74	74	73	73	73	73	72	73	72	72	72	72	72
Social	45	45	46	46	48	47	50	52	53	54	56	56	56	55

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	49	52	49	49	49	50	49	48	48	48	50	49	48	48	49
Economy	35	35	30	30	28	30	28	25	26	25	29	27	27	27	28
Social	49	66	65	67	68	69	69	70	70	70	70	70	69	69	69
Political	89	89	90	87	93	93	93	93	93	93	92	93	93	93	93
Sustainability Indices															
Ecological	72	72	71	70	70	71	70	71	70	71	70	70	70	70	70
Social	57	59	61	64	65	64	66	69	70	71	71	72	73	74	75

Development of real GDP per capita in Turkey with and without progressing globalization



Average GDP growth per year and resident

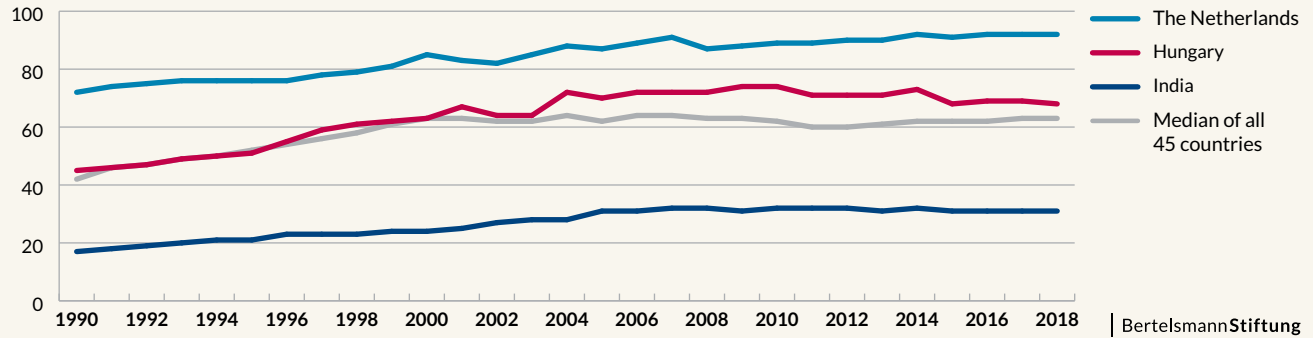
Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
34.	Turkey	287
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

### 4.43 Hungary



Hungary opened up continuously until the global economic crisis. It is now better internationally networked than the majority of the reporting countries. Since 2009, the country's international economic integration has declined. The country's per capita income gains are in the midfield.

Globalization index for Hungary as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



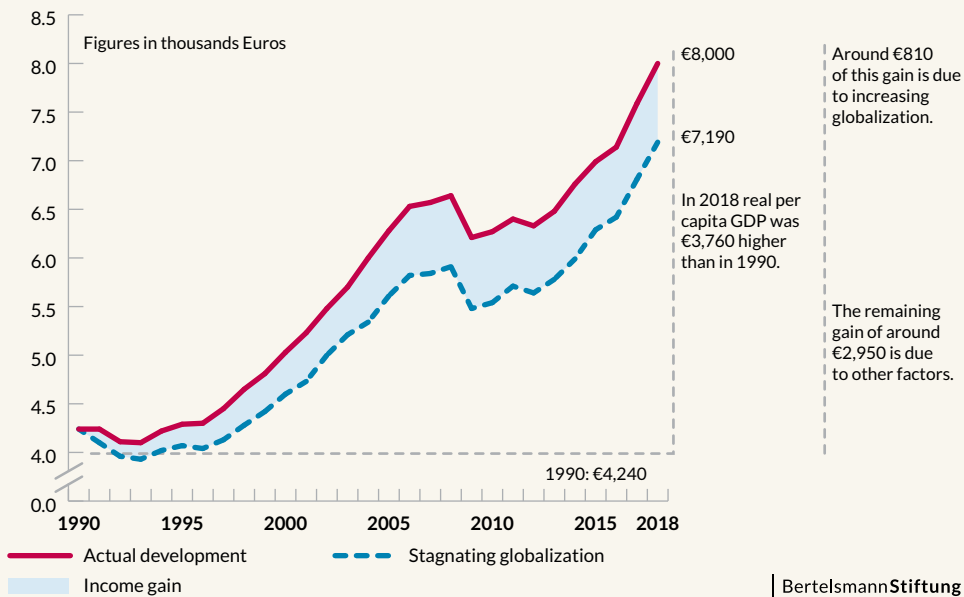
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	45	46	47	49	50	51	55	59	61	62	63	67	64	64
Economy	32	33	31	30	30	31	35	42	45	46	49	55	50	49
Social	65	67	74	76	79	81	81	81	82	82	81	81	81	82
Political	63	66	71	77	81	83	86	87	87	88	89	90	89	91
Sustainability Indices														
Ecological	62	62	63	63	64	64	64	65	65	66	66	66	66	66
Social	65	65	65	65	66	66	67	67	67	68	69	70	71	72

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	72	70	72	72	72	74	74	71	71	71	73	68	69	69	68
Economy	63	60	61	62	60	65	64	58	59	59	63	55	55	56	55
Social	82	84	86	86	87	86	86	87	86	86	85	85	85	85	85
Political	90	90	91	91	92	92	91	91	92	92	91	92	92	92	92
Sustainability Indices															
Ecological	66	66	67	67	68	68	69	70	71	72	71	71	72	72	72
Social	73	74	75	76	77	76	76	76	77	77	79	79	80	80	81

Development of real GDP per capita in Hungary with and without progressing globalization



Average GDP growth per year and resident

Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
23.	<b>Hungary</b>	<b>533</b>
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

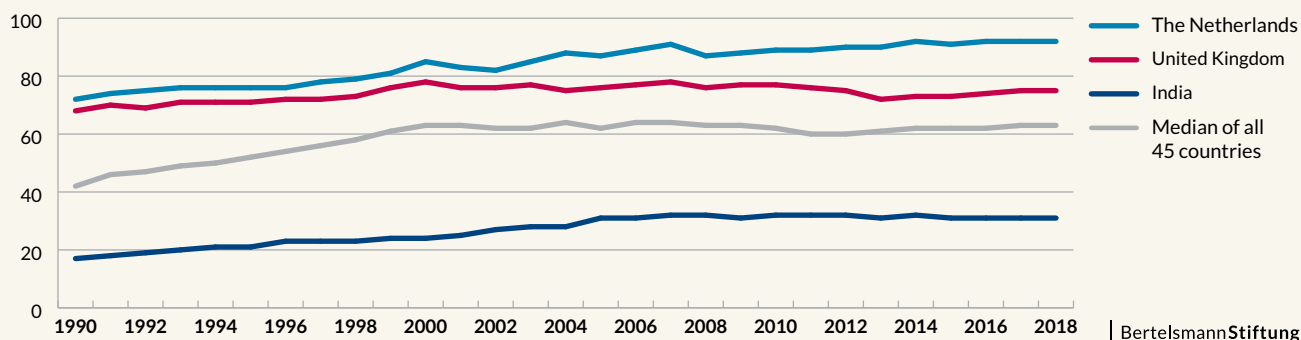


## 4.44 United Kingdom



The United Kingdom is one of the best connected reporting countries. However, the extent of its global integration was very strong in 1990 already. Accordingly, the country's per capita income gains remain in the international midfield despite the good starting position.

Globalization index for the United Kingdom as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



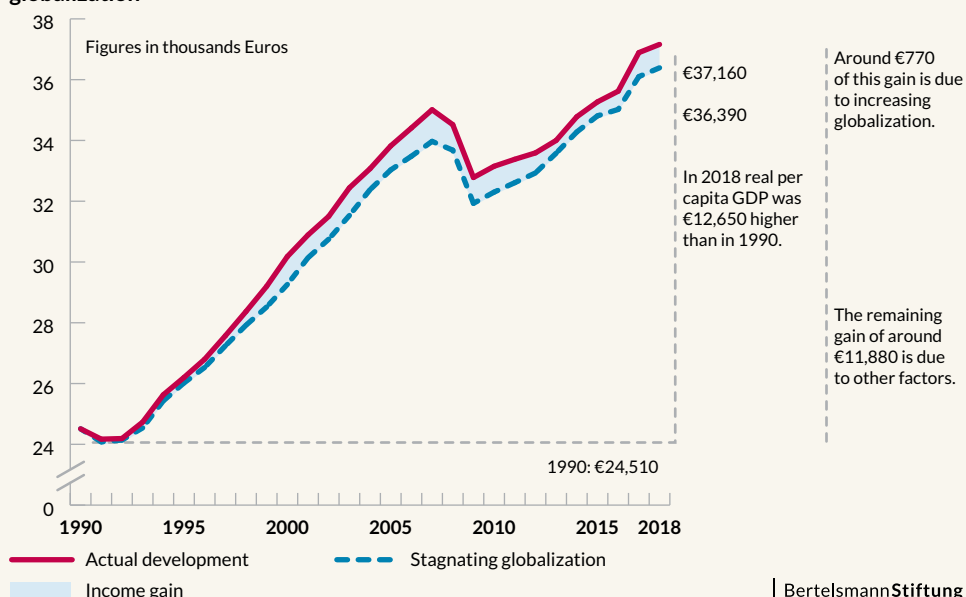
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	f1999	2000	2001	2002	2003
Overall Index	68	70	69	71	71	71	72	72	73	76	78	76	76	77
Economy	59	58	57	59	58	57	59	59	61	64	67	64	63	65
Social	77	79	79	80	82	83	86	87	89	90	92	91	93	93
Political	88	95	95	98	98	98	96	96	96	96	97	97	97	97
Sustainability Indices														
Ecological	71	70	71	71	71	71	71	71	71	71	71	71	71	71
Social	66	66	66	66	66	67	67	68	69	70	71	72	75	76

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	75	76	77	78	76	77	77	76	75	72	73	73	74	75	75
Economy	62	63	65	67	64	65	65	64	62	58	60	59	61	63	62
Social	93	94	93	94	94	93	92	92	92	92	91	91	91	91	91
Political	96	96	96	97	96	96	96	96	96	96	96	96	96	97	97
Sustainability Indices															
Ecological	71	71	71	72	72	73	73	73	73	73	74	75	74	74	74
Social	76	77	77	78	78	78	80	80	81	81	83	85	86	87	87

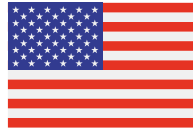
Development of real GDP per capita in the United Kingdom with and without progressing globalization



Average GDP growth per year and resident

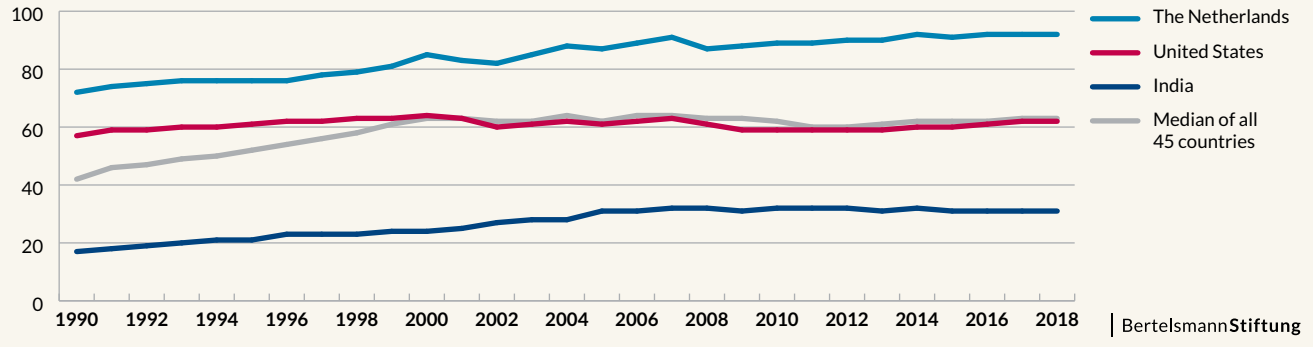
Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
21.	<b>United Kingdom</b>	<b>598</b>
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

## 4.45 United States



The United States remains below the majority of the reporting countries in the globalization index ranking. Global integration was hardly expanded at all during the period under consideration. The country's per capita income gains from globalization is, therefore, in the midfield as well.

Globalization index for the United States as compared to the Netherlands (highest value in 2018) and India (lowest value in 2018)



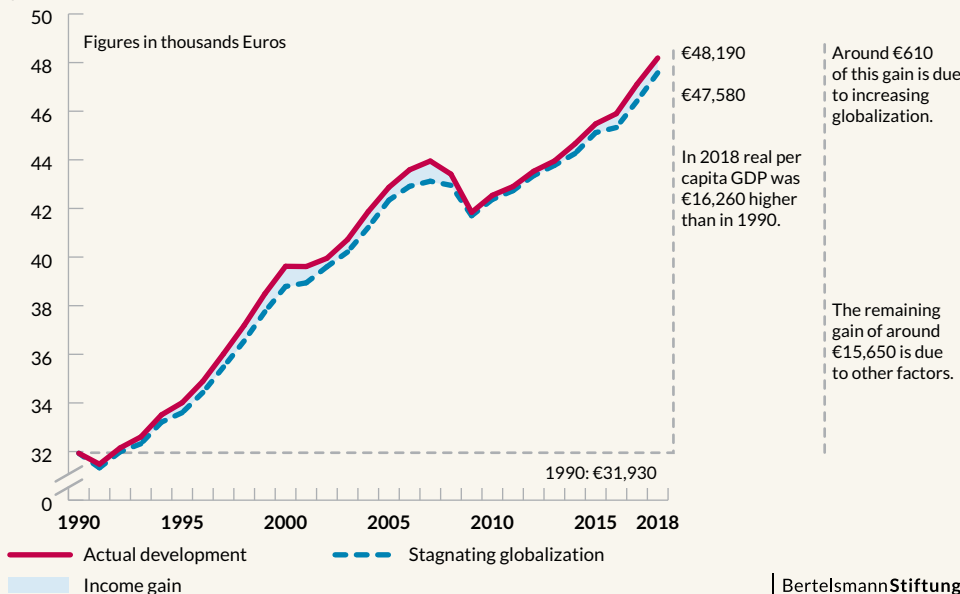
Values of the globalization index, its three sub-indices, and the sustainability indices

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Overall Index	57	59	59	60	60	61	62	62	63	63	64	63	60	61
Economy	43	44	43	43	43	44	45	46	47	48	48	46	42	43
Social	76	76	77	78	78	80	80	80	81	82	83	83	83	83
Political	82	87	89	93	92	94	93	93	93	92	93	93	93	94
Sustainability Indices														
Ecological	64	64	64	64	64	64	64	64	64	65	64	64	64	65
Social	63	63	62	63	64	65	67	68	69	71	72	73	74	74

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Overall Index	62	61	62	63	61	59	59	59	59	59	60	60	61	62	62
Economy	45	43	45	47	42	39	40	39	39	40	42	42	44	45	44
Social	84	84	84	85	85	84	84	84	84	83	83	84	84	84	84
Political	93	92	93	93	93	92	92	92	93	92	92	92	92	92	92
Sustainability Indices															
Ecological	65	65	65	65	66	67	67	67	68	68	68	68	68	68	68
Social	75	76	76	77	77	75	76	76	77	77	79	80	81	82	82

Development of real GDP per capita in the United States with and without progressing globalization



Average GDP growth per year and resident

Ranking	Country	in euros
1.	Japan	1,787
2.	Ireland	1,609
3.	Switzerland	1,583
4.	Finland	1,344
5.	Israel	1,275
...		
26.	<b>United States</b>	<b>452</b>
...		
41.	Russia	115
42.	China	95
43.	Indonesia	64
44.	Nigeria	30
45.	India	24

## 5 Annex

### 5.1 Methodology for determining the “globalization champion”

Detailed examinations of the causative relationships between globalization and economic development are at the core of this study. Knowledge of the cause-effect relationships is used to quantify the economic changes due to globalization for the ex-post period from 1990 to 2018, and to turn them into a list of globalization winners.

Determination of the “globalization champion” comprises the following three steps:

- Work step 1: Design of the globalization index
- Work step 2: Investigation of the interdependences between globalization and economic development
- Work step 3: Determination of the “globalization champion”

#### 5.1.1 Design of the globalization index

The of complex process of the economic influence of globalization must be made measurable in order to quantify its impact. This is done with a comprehensive index. This index contains differentiated indicators that reflect the economic and the political and social aspects of globalization alike (Table 8). The established KOF Index of Globalization of the Eidgenössische Technische Hochschule Zürich serves as the methodological model for the globalization index used here (Dreher 2006).

The selected economic indicators are broken down into two subject areas. The first subject area, “transaction sizes”, covers indicators that relate to actual transactions in goods, services, or financial resources. A larger transaction volume indicates that a country is more closely linked to the rest of the world. The second subject area, “transaction

restrictions”, includes indicators that reflect restrictions for free transfers of goods and financial transfers. Transaction restrictions suggest a less globalized country. Both the social and the political aspects of globalization are reflected in the respective sub-indices of the KOF Index of Globalization.<sup>7</sup>

The selected indicators map the process of globalization as a whole very well, concerning both the depth and breadth of the partial aspects considered. The indicators must be combined into an index to provide a comprehensive view of globalization. For this purpose, the data are first cleared of outliers and then normalized to a uniform indicator between 0 and 100.<sup>8</sup> Higher values correspond to “more globalization”.<sup>9</sup> Removal of outliers is justified from a content and technology point of view alike: In terms of content, this is the case because not every extreme manifestation also expresses globalization.<sup>10</sup> In technical terms, outliers distort values after standardization of the indicators.

In the next step, the economic indicators are first combined into a sub-index. This is done separately for the indicators of the two subject areas of transaction sizes and

7 Since a higher level of detail of the indicator is required in the impact analyses for the future scenarios of globalization, similar simplifications are not possible for the economic component of globalization.

8 In order to clear the data of outliers, any indicator’s values below the 5 percent quantile and above the 95 percent quantile are adjusted to the lower or upper boundary values of these quantiles.

9 The following formula normalizes indicators for which increasing values correspond to “more globalization”:  $(X_{j,t} - \text{Min}(X)) / (\text{Max}(X) - \text{Min}(X)) \cdot 100$ . The value  $X_{j,t}$  is the respective value of the indicator for country  $j$  at time  $t$ .  $\text{Max}(X)$  and  $\text{Min}(X)$  are the maximum and minimum values for the respective indicator for all countries and all points in time. The following formula normalizes indicators for which increasing values correspond to “less globalization”:  $(\text{Max}(X) - X_{j,t}) / (\text{Max}(X) - \text{Min}(X)) \cdot 100$ .

10 For example, the turnover of goods in the port of Antwerp overestimates Belgium’s actual exports and imports.

TABLE 8 Applied globalization indicators

Indicators	Description	Source
<b>Economic indicators</b>		
<b>Transaction sizes</b>		
Trade in goods (in % of gross domestic product)	Total of goods exports and imports in % of gross domestic product.	World Bank, World Development Indicators, 2019
Trade in services (in % of gross domestic product)	Total of service exports and imports in % of gross domestic product.	World Bank, World Development Indicators, 2019
Foreign direct investment (as % of gross domestic product)	Total in- and outbound foreign direct investment (stock) in % of gross domestic product.	United Nations Conference on Trade and Development, 2019
Portfolio investment (in % of gross domestic product)	Holdings of portfolio investments: Total assets and liabilities in % of gross domestic product.	International Monetary Fund, Coordinated Portfolio Investment Survey, 2019
Payments to foreigners (in % of gross domestic product)	Total of wage payments to foreign workers and investment income in % of gross domestic product. Income from intangible goods is not included.	World Bank, World Development Indicators, 2019
<b>Transaction restrictions</b>		
Import barriers	This indicator is based on the following question from the Global Competitiveness Report: "In your country, non-tariff barriers reduce the ability of imported goods to compete in the domestic market." The question was rephrased slightly over the years. Higher values reflect lower import barriers.	Fraser Institute, 2019
Import duties	Indicator between 0 and 10. Higher values reflect lower import duties. A value of 0 corresponds to an average import duty of 50 %.	Fraser Institute, 2019
Taxes on international trade (in % of tax revenue)	Taxes on international trade include import and export duties, profits from monopolies, foreign exchange gains, and taxes on foreign exchange gains.	World Bank, World Development Indicators, 2019
Capital controls	Index comprising two equally weighted components. (1) Indicator based on the question of the Global Competitiveness Report: "How widespread is foreign ownership in your country?" (2) Indicator of the International Monetary Fund, including 13 types of capital controls.	Fraser Institute, 2019
<b>Social indicators</b>		
Sub-index "Social globalization" of the KOF Index of Globalization	The sub-index includes indicators on personal contacts, information flows, and cultural proximity.	ETH Zurich, KOF globalization index, 2019
<b>Political indicators</b>		
Sub-index "Political globalization" of the KOF Index of Globalization	This sub-index includes indicators such as the number of foreign representations and international treaties, membership in international organizations, and participation in UN security missions.	ETH Zurich, KOF globalization index, 2019
Source: Prognos 2020		BertelsmannStiftung

transaction restrictions. The main component analysis uses a statistical weighting procedure to examine potential linear combinations of the individual indicators and select the weighting factors in a manner that keeps variance of the weighted sum as low as possible. Principal component analysis maximizes the statistical power of the resulting index this way. The sub-indices created for the individual subject areas in this manner become part of in the economy sub-index at a weighting of 50 percent each.<sup>11</sup>

The three sub-indices are subsequently aggregated into a globalization index. To this end, the economic component is weighted at 60 percent and the social and

<sup>11</sup> The weighting decisions for the subject areas correspond to the specification of the KOF Index of Globalization.

political components at 20 percent each. This deliberate decision reflects the idea that the economic indicators of globalization are most essential for a country's economic development. The disproportionately high weighting of the economic component must, therefore, always be considered in the context of the objectives of this study. It does not represent any general value judgment concerning the significance of the individual components for globalization.

Some of the time series used have gaps. Missing data points are supplemented: Gaps within time series are interpolated linearly. Missing values at the beginning or end of a time series are replaced by the last available data point. If an indicator is not available for a country across the whole period, the full time series is imputed using regression.

For this purpose, the indicator is explained in a sub-regression through all other indicators used. Knowledge of the explanatory content and the characteristics of available indicators allows an approximation of unavailable indicators.

### 5.1.2 Investigation of the interrelations of effects

This step is to quantify the growth effect of globalization by way of regression analyses that allow isolation of the effect of individual influences on economic development by statistically controlling the effects of other explanatory variables of economic development.

In the regressions, economic development is operationalized as a variable to be explained by the growth of economic output per capita in percent. The globalization index serves as the central explanatory variable. The regression results for this variable show the degree to which economic development is driven by globalization. In light of the relevance of globalization for economic performance of an economy, we expect a significant positive influence of this variable.

Other key determinants of economic development must be taken into account to ensure that the impact of globalization is neither over- nor underestimated (Table 9). The expected growth effects of such variables are based on both theoretical considerations and empirical findings:

- The level of gross domestic product per capita is considered in light of economic convergence theory.<sup>12</sup> It shows that economies with lower gross domestic products per capita tend to have higher economic growth. This in turn suggests a negative influence of this determinant.
- A higher birth rate means that a given economic growth is spread over a larger population base in the short term. Accordingly, we expect the growth of economic output per capita in percent to reduce as the birth rate increases.<sup>13</sup>

12 The gross domestic product per capita becomes part of the regressions with its value offset by two years in order to avoid partially explaining economic growth with itself as a dependent variable.

13 Higher birth rates can positively affect economic growth in the long term. However, such effects are not the subject of this investigation.

- A positive influence of (private and public) investment activities on economic growth per capita can be assumed since investment, as a determinant of the capital stock, makes significant contributions to an economy's performance.
- The inflation rate serves as an indicator of macroeconomic stability. A low inflation rate is assumed to stimulate economic activity. A high inflation rate reflects an overheating economy. Based on these considerations, we expect inflation to negatively impact economic growth.
- Government consumption and the debt-to-GDP ratio are considered key indicators of fiscal policy. The influence of either of these indicators on economic growth is not clear. While neoclassical theory suggests that a high debt-to-GDP ratio is associated with a reduction of economic growth, demand-oriented economic theory assumes that a debt-financed expenditure impulse boosts economic performance instead. The effect of government consumption is also not clear a priori. On the one hand, high government consumption may crowd out of private investment. On the other hand, private investment may also be induced by additional demand from consumptive government spending.
- We use the rule of law index to monitor the quality of legal systems. A strong legal system is considered an important prerequisite for high economic growth.<sup>14</sup>
- As a proxy for human capital, secondary education should have a positive impact on economic growth.
- We also use an indicator variable to monitor the global economic and financial crisis of the years of 2008 and 2009.

These regression analyses are based on data for 45 countries for the period from 1990 to 2018.<sup>15</sup> Table 9 lists the specific variables and data sources, providing 28 data points per country and variable. This data structure is considered by

14 This connection is not unconditional in theory. Negative inflation rates (deflation) may also negatively affect growth. With exception of Japan and Argentina, however, this analysis limits deflationary phases to 2009 and the period between 2013 and 2016.

15 Since the gross domestic product per capita is part of the regressions with its value offset by two years, the data used for the regressions refer to the period from 1992 to 2018.

TABLE 9 Potential influences on economic growth as control variables for regression analyses

Factors influencing economic growth	Control variables	Source
Level of gross domestic product per capita	Gross domestic product per capita of the penultimate period (logarithmic)	World Bank, World Development Indicators, 2019
Birth rate	Birth rate per woman (logarithmic)	World Bank, World Development Indicators, 2019
Investments	Gross fixed capital investments (in % of gross domestic product)	World Bank, World Development Indicators, 2019
Inflation	Increase in consumer prices (in %)	World Bank, World Development Indicators, 2019
State consumption	State consumption expenditure (in % of gross domestic product)	World Bank, World Development Indicators, 2019
Public debt	Public debt (in % of gross domestic product)	International Monetary Fund, 2019
Quality of institutions	Rule-of-law index (scale from 0 to 10)	Fraser Institute, 2019
Secondary school education	Number of secondary-school students divided by the number of all entitled to attend secondary schools (in %)	World Bank, World Development Indicators, 2019
Crisis indicator 2008–2009	Indicator variable with value 1 for the years 2008–2009 and value 0 for all other years.	

Source: Prognos 2020 | BertelsmannStiftung

using special panel regression models.<sup>16</sup> The two potential error sources of unobserved heterogeneity and potential endogeneity of various influencing variables must be considered in the detailed specification of the regression model.

Unobserved heterogeneity occurs because even careful selection of determinants does not guarantee that all differences between the countries considered have been adequately considered. If such unobserved properties are neither correlated with the variable to be explained nor with the determinants taken into account, no complication arises. If this happens, however, unobserved heterogeneity becomes an issue. The explanatory content of unobserved properties is then incorrectly assigned to other determinants. Since unobserved heterogeneity distorts estimation results for all determinants, fixed-effects models are used in this analysis to review any differences between countries that can be considered approximately constant over the period considered.

Issues of endogeneity occur, for example, where mutual dependencies exist between the variable to be explained and one or several of its determinants. Such a connection can be assumed, among other things, for investment activity

and economic growth: A high level of investment activity benefits economic growth (and is also part of it), while good economic development leads to a positive investment climate at the same time. In such cases, there is the problem that it is impossible to determine which changes in the determinant influence the variable to be explained and which changes are subject to the reverse causality. Endogeneity issues also distort estimation results.

This study uses instrumental variables estimations (IV) to consider the potential endogeneity issue. In this two-step procedure (also called the two-step least-squares procedure), the variables suspected of causing endogeneity problem issues are split into two segments: One that is exogenous and one that is endogenous in relation to the variable to be explained. In the second step, the actual regression, the procedure considers only the exogenous part of the original regressor to keep the endogeneity issue out of the final regression. In order to apply this method, (at least) one instrument variable is required for each potentially endogenous determinant. The instrument variable must be strongly correlated with the parameter subject to the endogeneity issue, while at the same time having explanatory power for the parameter to be explained. However, it must not be affected by the same endogeneity issue. This study uses time series of potentially endogenous variables with a time offset of one year as

<sup>16</sup> All analyses were performed using the statistics program EViews 11.

instrument variables. Assuming that the explanatory variables may be influenced by present and past values of the GDP growth rate, but not by future realizations, these time series meet all requirements for appropriate instrument variables. Based on this approach, the assumption of exogeneity was refuted for the two variables of investment activity and birth rates.

In addition to the two control variables, the globalization index was also used as the central explanatory variable in the regression. The respective previous year's globalization index became the instrument variable. This considers any endogeneity issues between economic growth and the degree of globalization of an economy. For example, it is possible that a good economic development may boost imports and, as a result, the globalization index through increased domestic consumption. The IV method helps eliminate such issues of reverse causality. The instrument estimate confirms the statistically significant positive influence of globalization on the development of gross domestic product per capita, indicating a clear causal relationship.

The regression analysis results can, therefore, be interpreted as follows concerning the effect of globalization: If the globalization index rises by one point, the growth of the gross domestic product per capita increases by  $\beta$  percentage points. In this,  $\beta$  corresponds to the amount of the estimated growth effect of globalization. For example, if the economic growth per capita is 2.5 percent, the estimator for the effect of globalization is  $\beta=0.2$ . In this case, the one-point increase of the globalization index would increase economic growth (*ceteris paribus*) from 2.5 percent to 2.7 percent. This causal link is consistent across all countries viewed and across the entire period under consideration.

This knowledge about the sensitivity of economic growth per capita to globalization is applied to quantify globalization-induced growth gains of the individual countries in the next step.

### 5.1.3 Determining the “globalization champion”

Quantification of globalization-induced growth gains is performed in two successive steps:

- The first step is to calculate the growth rates each country would have seen if globalization had stagnated at the 1990 level. For this purpose, the annual changes in the globalization index are multiplied by the estimate of the amount of the globalization effect and subtracted from the historical values of the growth rates.
- A counterfactual growth path for each country results based on the gross domestic product at the beginning of the period under observation and applying the recalculated growth rates. This reflects the economic development if globalization had stagnated.

The globalization-induced growth gains and losses of the individual countries can be quantified and compared by comparing historical values of gross domestic product with those resulting from the counterfactual growth path. Final determination of the “globalization champion” depends on which country has achieved the highest income gains per capita in the entire period from 1990 to 2018 due to globalization.

## 5.2 Additional tables

TABLE 10 Globalization index over time,  
Argentina to Denmark

	ARG	AUS	BEL	BRA	BGR	CHL	CHN	DNK
1990	33.2	51.7	73.0	28.0	28.0	33.2	23.1	64.0
1991	35.9	52.9	74.8	29.4	26.3	35.7	24.3	66.9
1992	37.4	54.6	76.5	31.2	31.7	37.0	25.1	68.6
1993	40.1	56.1	78.9	31.9	29.9	37.9	26.2	71.4
1994	42.3	57.9	78.5	32.8	29.9	40.0	26.4	71.9
1995	46.0	58.5	75.9	35.2	31.4	40.7	27.9	72.5
1996	44.5	58.6	78.1	35.8	36.1	41.8	27.8	74.4
1997	43.4	59.1	80.2	35.5	36.7	44.1	28.2	72.5
1998	44.0	60.0	80.6	34.3	37.9	45.7	31.5	72.4
1999	44.2	61.1	80.4	34.6	39.8	48.7	32.4	73.7
2000	44.1	62.5	84.2	34.2	43.3	51.0	33.6	78.5
2001	42.6	63.0	83.4	37.9	43.5	53.7	38.5	77.4
2002	39.4	61.5	82.4	39.0	41.8	53.9	36.1	76.7
2003	37.7	62.4	83.6	37.4	45.4	56.7	36.5	76.6
2004	39.5	62.4	84.4	39.3	50.9	58.9	40.8	75.0
2005	37.4	62.0	83.7	41.0	49.3	59.3	42.4	75.4
2006	36.3	64.0	85.0	40.5	54.5	61.3	39.5	75.5
2007	36.2	65.4	86.7	40.6	62.1	63.7	41.7	77.5
2008	36.3	62.7	83.6	38.6	60.0	63.1	40.4	75.3
2009	34.7	64.1	84.0	38.7	57.2	61.1	41.1	73.3
2010	34.6	64.7	84.0	40.0	56.3	60.3	40.7	74.2
2011	33.6	64.9	81.3	39.4	55.1	57.7	39.8	73.4
2012	34.0	62.9	83.1	39.5	59.0	55.9	39.8	72.9
2013	33.3	61.4	81.9	39.0	60.8	55.3	40.7	72.2
2014	33.1	64.3	85.6	39.7	60.8	60.3	42.3	74.8
2015	34.2	63.0	83.6	38.3	61.7	57.0	41.6	74.1
2016	35.4	63.2	82.9	39.0	61.8	57.7	42.3	74.7
2017	36.1	64.0	81.7	38.8	62.3	60.1	42.6	75.3
2018	37.2	63.8	81.8	39.5	60.7	59.5	42.4	75.1

Source: Prognos 2020 | BertelsmannStiftung

TABLE 11 Globalization index over time,  
Germany to Ireland

	DEU	EST	FIN	FRA	GRC	IND	IDN	IRL
1990	52.5	38.2	54.2	60.1	38.5	17.4	21.1	69.5
1991	58.8	38.2	57.8	62.3	47.5	18.0	23.1	71.1
1992	59.1	38.0	59.7	63.4	48.3	19.0	24.2	72.4
1993	60.1	41.1	62.6	64.2	51.0	20.1	23.8	74.1
1994	60.6	45.0	63.2	63.4	51.6	20.6	23.0	75.6
1995	62.2	55.9	64.3	64.0	51.7	21.2	26.3	77.1
1996	63.6	58.1	68.3	64.8	53.4	23.5	29.0	78.2
1997	65.5	61.4	69.5	66.8	55.2	23.5	31.5	79.9
1998	66.8	61.8	70.2	68.9	57.8	23.5	36.3	85.3
1999	66.9	62.3	70.6	70.9	60.7	23.7	37.1	86.3
2000	69.3	64.0	73.3	70.9	63.5	24.2	38.6	89.0
2001	68.1	64.5	72.6	67.5	63.7	24.7	39.5	88.8
2002	69.0	64.0	71.7	70.0	63.4	26.6	37.5	89.2
2003	70.2	65.4	72.8	69.5	65.4	27.9	38.4	88.3
2004	69.3	68.5	73.5	71.4	66.2	28.4	41.5	88.3
2005	68.1	67.2	71.2	69.7	63.3	31.0	43.8	87.7
2006	68.4	67.3	70.7	69.7	63.2	30.9	44.0	84.9
2007	68.3	68.4	72.2	71.0	64.4	32.5	43.8	86.4
2008	66.2	68.0	69.8	69.1	63.8	32.4	43.2	84.7
2009	65.9	66.8	69.6	69.4	62.8	31.0	43.3	91.4
2010	65.0	68.5	70.8	69.1	61.6	31.7	43.1	92.0
2011	64.8	68.3	71.5	67.8	60.5	32.0	42.3	91.3
2012	64.8	68.2	72.2	68.2	60.1	31.8	43.5	89.9
2013	63.3	67.1	68.0	67.0	60.9	31.0	43.3	89.9
2014	65.8	69.3	71.1	70.2	62.0	32.4	47.1	92.1
2015	65.0	67.7	70.2	68.8	60.3	31.5	44.5	92.2
2016	66.5	68.5	71.2	68.2	60.7	31.3	44.4	90.3
2017	66.8	68.7	71.4	68.2	61.5	31.0	44.2	90.0
2018	66.4	68.0	70.3	67.9	62.0	31.3	44.4	90.0

Source: Prognos 2020 | BertelsmannStiftung



TABLE 12 Globalization index over time,  
Israel to Mexico

	ISR	ITA	JPN	CAN	LVA	LTU	LUX	MEX
1990	36.4	50.0	36.7	59.1	29.8	32.2	78.8	33.3
1991	36.3	52.0	37.9	60.6	29.8	32.2	80.9	33.6
1992	36.6	53.4	42.3	61.2	29.5	31.8	86.7	37.3
1993	39.9	55.3	42.8	62.5	31.1	31.4	87.1	37.5
1994	40.7	55.6	42.9	63.2	35.5	34.3	82.1	38.3
1995	41.3	57.5	39.7	64.3	38.7	41.1	81.9	41.4
1996	43.8	58.6	43.6	65.3	41.9	45.4	82.4	37.3
1997	46.1	60.0	44.7	66.8	43.1	47.4	83.1	36.5
1998	48.7	61.6	47.1	68.2	44.2	47.8	83.8	36.1
1999	51.6	64.7	48.0	69.7	44.6	47.9	84.4	35.6
2000	54.6	66.0	49.1	72.5	43.6	48.6	85.1	35.6
2001	57.3	64.3	48.3	71.4	45.9	51.7	84.7	34.6
2002	58.5	63.3	47.9	69.1	46.7	52.2	84.3	35.7
2003	59.4	62.7	50.6	70.4	47.4	53.1	85.5	35.9
2004	57.7	65.1	51.0	71.1	52.6	55.6	86.9	36.4
2005	60.2	64.4	51.3	68.9	53.6	55.3	83.0	41.1
2006	58.8	63.5	51.3	68.4	54.4	55.3	81.2	38.8
2007	59.7	63.2	51.4	69.8	56.4	56.7	86.0	40.2
2008	61.5	61.4	50.3	66.9	55.6	56.3	85.9	40.0
2009	61.9	62.2	50.8	68.6	53.3	52.4	85.4	41.6
2010	61.5	61.6	50.8	68.7	54.5	53.8	85.3	43.0
2011	55.0	60.0	49.5	66.6	55.1	55.5	84.2	43.3
2012	54.4	59.2	50.9	66.6	56.0	55.2	83.3	43.6
2013	54.2	58.8	53.6	66.6	55.8	58.3	83.4	43.6
2014	57.0	60.9	54.8	69.3	58.0	59.9	84.8	44.8
2015	55.9	62.5	56.2	68.6	57.5	61.1	79.4	46.3
2016	56.7	62.6	56.8	69.7	59.9	61.9	79.5	46.8
2017	56.7	63.2	57.7	70.0	60.6	62.9	79.8	47.1
2018	56.9	62.9	58.0	69.1	60.4	62.9	79.7	46.8

Source: Prognos 2020

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TABLE 13 Globalization index over time,  
New Zealand to Romania

	NZL	NLD	NGA	NOR	AUT	POL	PRT	ROU
1990	51.5	72.3	19.9	64.7	62.3	30.0	44.6	22.7
1991	53.7	74.0	21.7	66.4	65.6	33.2	49.9	25.0
1992	56.3	75.4	22.3	66.1	65.9	36.0	54.9	24.8
1993	57.2	76.1	26.1	66.9	67.1	37.7	58.4	25.8
1994	58.5	76.3	25.0	67.6	68.0	37.8	59.6	28.6
1995	59.2	75.7	18.1	67.1	68.9	42.7	60.6	31.4
1996	59.6	76.4	20.5	68.0	70.2	43.9	61.7	32.4
1997	60.7	78.0	23.1	68.3	71.5	45.2	62.7	34.1
1998	62.5	79.3	23.2	68.2	72.7	47.6	63.7	34.1
1999	64.2	81.5	25.3	68.2	74.2	48.8	64.0	36.0
2000	66.7	84.8	25.3	69.0	76.1	50.3	66.7	39.4
2001	65.3	83.2	25.6	68.3	74.8	48.8	67.8	40.8
2002	64.7	81.8	25.2	65.4	73.9	50.5	65.2	42.6
2003	63.4	85.0	26.5	68.5	75.4	53.0	67.2	43.3
2004	64.3	88.3	25.0	65.6	75.5	59.8	70.6	45.4
2005	63.8	87.4	32.2	61.4	74.6	57.2	67.8	50.0
2006	65.2	88.6	34.3	64.1	75.0	57.8	70.2	46.0
2007	64.7	90.6	34.6	66.2	76.7	60.0	71.7	59.0
2008	65.3	86.8	31.9	64.2	73.9	59.5	70.4	58.6
2009	64.9	88.3	33.2	66.9	73.7	59.4	71.3	57.9
2010	64.2	89.2	34.1	65.3	72.5	58.2	71.1	56.5
2011	63.9	89.0	34.4	64.1	72.0	57.1	68.9	54.8
2012	61.9	89.9	34.9	66.3	72.2	57.7	68.0	55.1
2013	60.7	89.5	38.0	66.0	70.2	59.0	66.2	56.8
2014	63.3	91.6	35.0	65.4	73.5	60.6	68.1	59.3
2015	60.8	91.4	38.7	70.0	71.8	60.5	69.6	59.6
2016	61.6	91.5	38.9	70.2	72.0	60.7	69.5	59.5
2017	61.4	92.2	38.8	69.3	72.2	60.8	70.5	59.6
2018	61.6	92.4	39.6	68.3	71.9	60.8	69.7	59.9

Source: Prognos 2020

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TABLE 14 Globalization index over time,  
Russia to South Korea

	RUS	SWE	CHE	SVK	SVN	ESP	ZAF	KOR
1990	27.3	66.9	65.5	41.7	27.1	55.9	23.9	23.3
1991	27.5	68.4	67.7	40.8	29.2	57.3	22.1	24.6
1992	28.3	68.2	68.1	40.2	32.1	58.8	22.1	27.2
1993	31.9	69.7	69.6	39.8	33.8	60.3	21.0	33.5
1994	33.0	70.3	69.7	40.4	36.4	61.4	22.5	34.0
1995	34.5	70.8	69.4	43.6	36.7	61.9	25.5	34.3
1996	35.3	70.8	70.9	45.3	39.8	62.4	27.7	35.8
1997	35.8	72.1	74.3	46.9	44.8	63.6	31.5	37.1
1998	37.5	73.0	76.5	48.9	46.2	65.2	33.9	40.3
1999	36.7	73.3	78.5	49.6	46.7	66.3	40.6	40.0
2000	38.0	75.2	83.8	53.1	48.4	68.2	42.4	41.8
2001	39.8	74.1	81.2	56.3	50.2	67.1	44.2	44.0
2002	41.4	74.6	80.1	52.4	50.9	66.8	44.6	42.9
2003	42.4	75.4	79.7	52.9	55.2	68.9	44.9	42.4
2004	42.3	75.6	76.4	69.5	60.9	68.0	43.4	44.4
2005	43.0	75.1	77.6	68.8	60.2	65.7	44.1	43.5
2006	42.5	75.8	78.4	68.5	60.0	65.6	45.0	45.2
2007	43.3	76.9	81.5	69.1	61.8	66.4	46.3	47.1
2008	41.0	74.8	79.2	67.8	62.3	65.2	45.8	46.2
2009	43.1	76.8	78.5	66.3	58.9	65.5	46.0	45.8
2010	43.2	76.1	78.8	66.1	58.9	65.6	46.2	45.9
2011	42.1	72.2	75.4	65.7	58.3	65.0	45.6	46.5
2012	42.5	71.8	77.1	64.2	58.1	64.0	46.3	47.2
2013	43.5	70.3	76.7	64.0	58.0	63.1	46.6	46.1
2014	43.3	75.3	79.9	67.6	60.5	64.9	48.5	48.1
2015	43.7	74.1	80.2	68.4	59.9	64.5	48.6	48.3
2016	44.4	72.9	82.2	68.5	60.2	65.2	48.3	48.4
2017	44.7	72.8	83.0	68.7	60.3	65.7	48.2	48.5
2018	43.9	72.4	81.5	68.5	60.1	65.2	47.3	48.7

Source: Prognos 2020

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TABLE 15 Globalization index over time,  
Czech Republic to United States

	CZE	TUR	HUN	GBR	USA
1990	51.3	31.2	45.1	68.5	57.5
1991	53.7	33.9	46.1	69.5	58.9
1992	52.4	35.7	47.3	69.0	59.0
1993	51.2	38.7	48.5	70.8	60.1
1994	52.2	43.9	50.3	70.9	60.2
1995	53.6	45.4	51.5	70.6	61.2
1996	54.3	45.9	54.5	71.6	61.6
1997	56.5	47.1	58.9	72.2	62.2
1998	57.5	45.9	60.9	73.4	62.8
1999	59.3	45.6	61.7	75.9	63.5
2000	60.9	46.4	63.2	78.2	64.1
2001	61.4	46.5	67.0	76.2	62.8
2002	62.5	44.7	64.1	75.9	60.2
2003	61.7	47.1	63.7	77.3	61.4
2004	66.7	48.6	72.1	75.0	62.3
2005	66.0	52.2	70.4	75.9	61.4
2006	65.8	49.2	71.7	77.0	62.4
2007	68.2	48.8	72.3	78.0	63.4
2008	66.5	49.2	71.8	76.2	60.8
2009	65.9	50.3	74.3	76.7	58.6
2010	65.6	49.0	73.8	76.6	58.9
2011	64.0	47.7	70.5	75.9	58.8
2012	66.0	48.3	71.1	74.7	58.9
2013	63.7	47.7	70.8	72.4	58.9
2014	68.6	49.7	73.2	73.1	60.4
2015	68.9	48.8	68.1	72.6	60.1
2016	68.9	48.3	68.6	73.9	61.5
2017	69.7	48.4	69.1	75.3	62.3
2018	69.1	48.8	68.3	75.1	61.6

Source: Prognos 2020

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TABLE 16 Regression results on the determinants of economic growth per capita – reliability test

Dependent variable: Growth of gross domestic product per capita in %	IV method with FE	IV method with FE	IV method with FE	IV-method with FE	IV method with FE	IV method with FE
Total globalization	0.34*** (0.07)	0.33*** (0.07)	0.28*** (0.07)	0.28*** (0.07)	0.28*** (0.07)	0.27*** (0.07)
Gross domestic product per capita of the penultimate period (logarithmic)	-7.86*** (1.42)	-7.73*** (1.42)	-7.07*** (1.49)	-6.89*** (1.57)	-6.76*** (1.59)	-7.70*** (1.68)
Birth rate (logarithmic)	-6.12*** (1.82)	-5.67*** (1.77)	-6.02*** (1.88)	-6.15*** (1.85)	-6.03*** (1.89)	-5.25*** (1.79)
Investments (in % of gross domestic product)	0.07 (0.06)	0.07 (0.06)	0.02 (0.07)	0.03 (0.07)	0.03 (0.07)	0.03 (0.07)
Crisis indicator 2008–2009	-3.76*** (0.46)	-3.78*** (0.46)	-3.33*** (0.41)	-3.42*** (0.40)	-3.42*** (0.40)	-3.25*** (0.39)
Inflation (in %)		-0.003 (0.004)	-0.004 (0.004)	-0.004 (0.004)	-0.004 (0.004)	-0.004 (0.004)
State consumption expenditure (in % of gross domestic product)			-0.52*** (0.13)	-0.51*** (0.13)	-0.52*** (0.13)	-0.55*** (0.12)
Public debt (in % of gross domestic product)				-0.02** (0.11)	-0.02* (0.11)	-0.02** (0.11)
Rule-of-law index					0.24 (0.42)	0.21 (0.42)
Secondary school education						0.05*** (0.02)
<b>Number of observations</b>	<b>1,215</b>	<b>1,215</b>	<b>1,215</b>	<b>1,215</b>	<b>1,215</b>	<b>1,215</b>
<b>R<sup>2</sup> (centered)</b>	<b>0.365</b>	<b>0.372</b>	<b>0.401</b>	<b>0.398</b>	<b>0.399</b>	<b>0.406</b>

Notes: The symbols \*, \*\*, \*\*\* indicate the significance of the estimation results for the 10%, 5% and 1% levels. Standard errors clustered by country are shown bracketed. All regressions contain a constant factor. FE is an abbreviation for country-specific fixed effects. IV = Instrumental variables estimation.

Source: Prognos 2020

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TABLE 17 Regression results on the determinants of per capita economic growth with sub-index-specific estimates of the growth impact of globalization – reliability test

Dependent variable: Growth of gross domestic product per capita in %	IV method with sub-index-specific estimators	IV method with sub-index-specific estimators	IV method with sub-index-specific estimators	IV method with sub-index-specific estimators	IV method with sub-index-specific estimators	IV method with sub-index-specific estimators
Economic globalization	0.09*** (0.02)	0.09*** (0.02)	0.05** (0.03)	0.04 (0.03)	0.04 (0.03)	0.05 (0.03)
Social globalization	0.15** (0.06)	0.15** (0.06)	0.12** (0.05)	0.13*** (0.05)	0.13*** (0.05)	0.12** (0.05)
Political globalization	0.17*** (0.04)	0.16*** (0.04)	0.18*** (0.03)	0.19*** (0.04)	0.19*** (0.04)	0.18*** (0.04)
Gross domestic product per capita of the penultimate period (logarithmic)	-10.4*** (1.52)	-10.3*** (1.49)	-9.88*** (1.50)	-9.82*** (1.55)	-9.78*** (1.56)	-10.1*** (1.60)
Birth rate (logarithmic)	-3.02* (1.57)	-2.82* (1.59)	-3.45** (1.60)	-3.49** (1.57)	-3.46** (1.55)	-3.09** (1.57)
Investments (in % of gross domestic product)	0.32*** (0.08)	0.32*** (0.08)	0.26*** (0.08)	0.23** (0.09)	0.23** (0.09)	0.23** (0.09)
Crisis indicator 2008–2009	-4.36*** (0.5)	-4.36*** (0.50)	-3.95*** (0.45)	-4.03*** (0.43)	-4.03*** (0.43)	-3.94*** (0.43)
Inflation (in %)		-0.002 (0.003)	-0.002 (0.003)	-0.002 (0.003)	-0.003 (0.003)	-0.003 (0.003)
State consumption expenditure (in % of gross domestic product)			-0.45*** (0.11)	-0.46*** (0.11)	-0.46*** (0.11)	-0.47*** (0.11)
Public debt (in % of gross domestic product)				-0.02 (0.01)	-0.02 (0.01)	-0.02 (0.01)
Rule-of-law index					0.06 (0.05)	0.06 (0.05)
Secondary school education						0.02 (0.01)
<b>Number of observations</b>	<b>1,215</b>	<b>1,215</b>	<b>1,215</b>	<b>1,215</b>	<b>1,215</b>	<b>1,215</b>
<b>R<sup>2</sup> (centered)</b>	<b>0.426</b>	<b>0.429</b>	<b>0.465</b>	<b>0.471</b>	<b>0.471</b>	<b>0.473</b>

Notes: The symbols \*, \*\*, \*\*\* indicate the significance of the estimation results for the 10%, 5% and 1% levels. Standard errors clustered by country are shown bracketed. All regressions contain a constant factor. IV = Instrumental variables estimation.

Source: Prognos 2020

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