Policy Brief #2018/02

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Globalization Report 2018: Who Benefits Most from Globalization?

There is growing uncertainty in industrialized countries as to whether globalization means more opportunity or more risk. Trump, Brexit and increasing populism are direct consequences of this development. However, our Globalization Report 2018 shows for the third time in a row, as in 2014 and 2016, that: when measured in terms of per capita gross domestic product, industrialized countries in particular continue to be the biggest winners as a result of increasing globalization.

In the Globalization Report 2018, we examine how much individual countries have benefited from increasing globalization between 1990 and 2016. In concrete terms, we calculate how high the gains in real per capita gross domestic product in 42 industrialized and emerging countries are as a result of increasing globalization.

We understand the term “globalization” comprehensively: It covers not only the economic integration of countries, but also their political and social interdependence. When understood in this way, globalization increases the growth of real gross domestic product (hereinafter: GDP) through a variety of channels: International trade allows each country to specialize in the manufacturing of products where they have the greatest advantages in terms of productivity. The international mobility of labor, capital and technology brings production factors to where they make the greatest contribution to macroeconomic added value.

International trade increases competitive pressure and thus the need to reduce costs of production through innovation and technical progress. The associated increase in productivity allows for higher GDP. The political agreement on a mutual recognition of product standards facilitates cross-border trade. All these developments promote economic growth. They also lead to a wider range of products and services as well as lower prices for consumers.

Question

The main question in the “Globalization Report 2018” is: What impact does the increase in globalization between 1990 and 2016 have on real – i.e. inflation-adjusted – per capita GDP in the 42 countries analyzed. This indicator was chosen because it is more meaningful for the prosperity of citizens than the GDP of the economy as a whole. In this context, it is important to remember that this approach does not answer two questions:

1. It does not calculate the impact of globalization in general on per capita GDP, but rather the impact of the increase in globalization between 1990 and 2016. This means that the calculated gains in GDP do not indicate how high per capita GDP in Germany, for example, would be without globalization, but rather how high it would be if Germany’s degree of globalization had not changed since 1990. It is possible to find calculations on the question of how high the gains in GDP attributable to foreign trade are, for example in the current report prepared by the German Council of Economic Experts (SVR 2017: 315) or by Ossa (2018: 14).

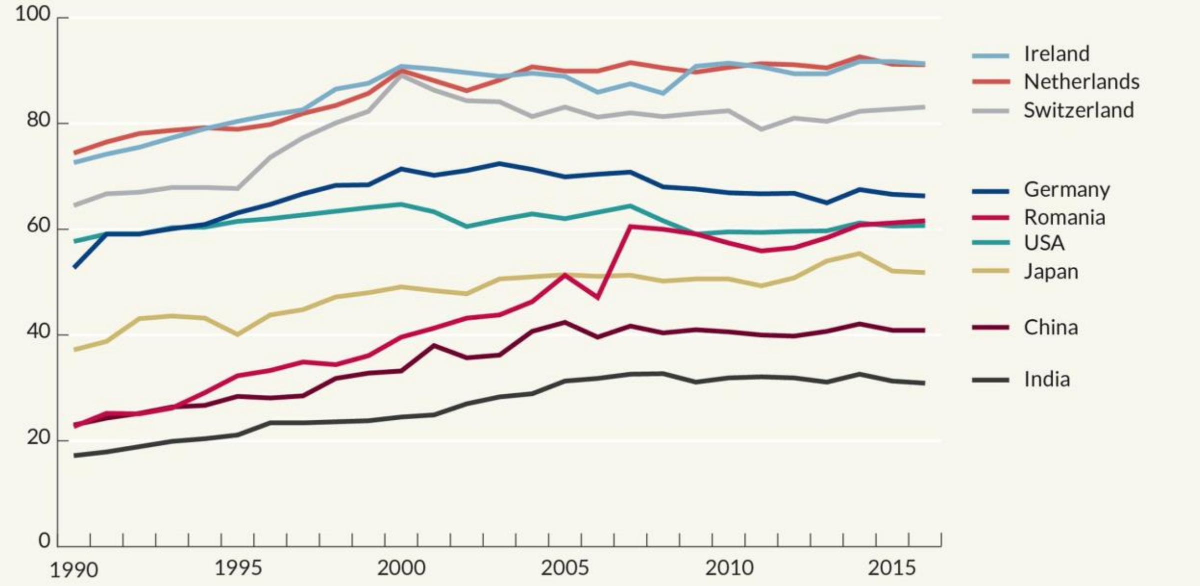
2. The opening of the borders to products, services and production factors changes the shortage situation in a country and thus all prices. As a result, globalization automatically produces not only winners, but also industries, sectors and groups of people whose incomes decline. These changes in income due to globalization are not shown in the average analysis chosen here. Calculations on this topic can be found, among others, in work by Autor, Dorn and Hanson (2013) for the United States and by Südekum, Dauth and Findeisen (2017) for Germany.

Measuring globalization

The extent of a country’s interdependence with the rest of the world is measured by an index that is very closely aligned with the established “KOF Globalization Index” drawn up by the ETH Zurich (see Dreher 2006). In addition to indicators on economic interconnectedness (e.g. data on cross-border, trade in goods and services, trade barriers and capital controls), it also includes information on the social aspects of globalization (e.g. international tourism, the level of the dissemination of information and ideas, as well as the percentage of the population that was born abroad), and also how politically integrated a country is in the world (e.g. data on membership in international organizations, on foreign embassies in the country in question and international treaties).

The period under review is from 1990 to 2016. The data can be used to draw up a globalization index for every country and every year, with scores between 0 and 100. The higher the number of points on the index, the more interconnected that country is with others in the world. Figure 1 shows the globalization measured in this way for selected countries.

FIGURE 1: **Globalization index for selected countries between 1990 and 2016.**



Source: Prognos 2018.

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The degree of globalization is particularly high in the case of small industrialized countries such as Belgium, Ireland, the Netherlands and Switzerland. These countries only have small domestic markets and therefore are involved in more foreign trade than large countries. Industrialized countries with a large domestic market such as Germany, Japan, Italy and the United States achieve only a medium score in the globalization index.

Emerging countries such as China and India have the lowest number of points on the index of all 42 countries. The reasons for this include economic restrictions such as capital controls and trade barriers. Additionally, the analyzed economic metrics are viewed in relation to GDP in each case. As a consequence, for example, China ranks only 38 out of all 42 countries for the indicator “goods exports in relation to GDP.”

The greatest gains in points on the globalization index were achieved by Eastern European countries.
Between 1990 and 2016, Lithuania, Estonia, Bulgaria and Slovenia increased their index scores by more than 30 index points, Romania even by almost 39 index points.”
In the United States and the United Kingdom, the globalization index rose by only three points during this period, while it increased by almost 14 points in Germany.

Finally, it can also be seen that for many developed countries, their scores on the globalization index have stagnated or even fallen since 2000/2001. Since 2007, following the bankruptcy of Lehman Brothers, the globalization index scores for 31 countries have fallen. The financial and economic crisis thus caused a setback for globalization. The eleven countries which have been able to achieve a higher globalization index score since 2007 include Mexico and Lithuania.

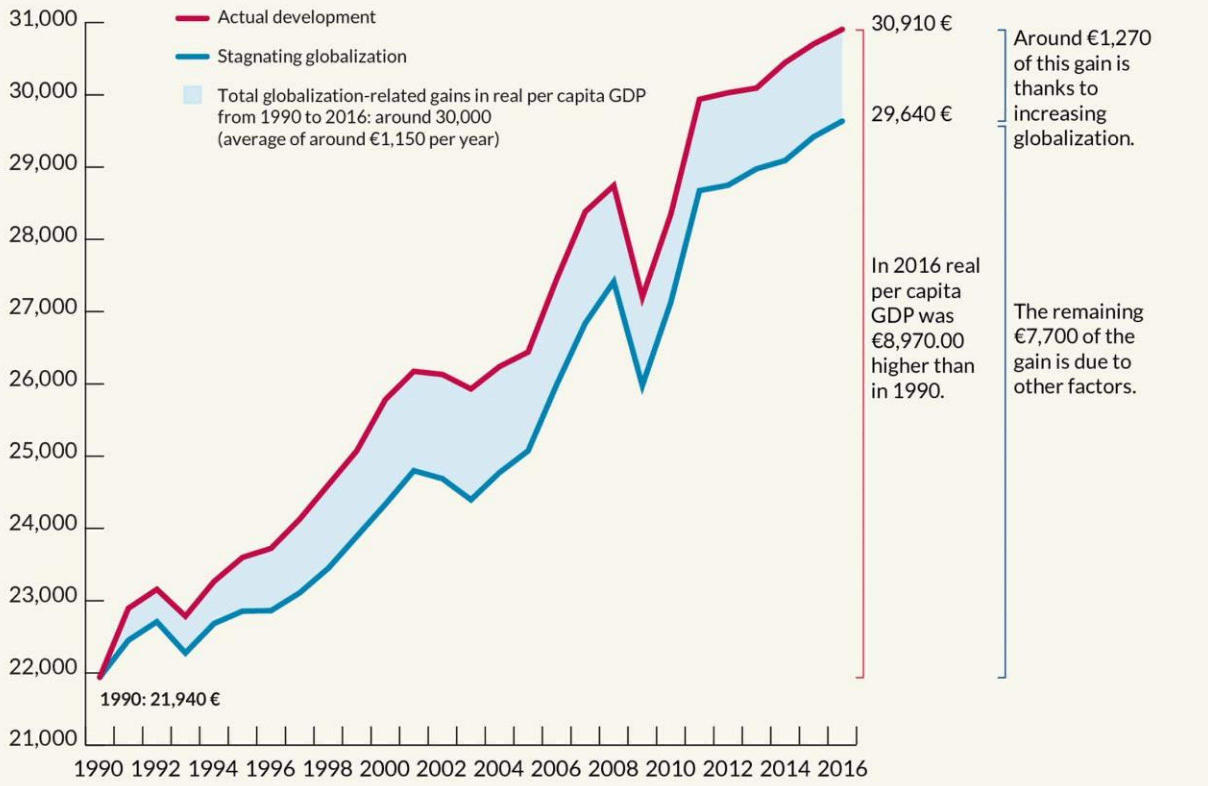
Measuring the growth effects induced by globalization

The second step involves using regression analyses to calculate what impact an increase in globalization has on the growth of real per capita GDP. The calculations come to the following result in regard to the period from 1990 to 2016 and the 42 analyzed economies. If the globalization index score rises by one point, this will lead to an increase of around 0.3 percentage points in the growth rate for real per capita GDP.

The final step was to compare the actual change in real GDP per capita between 1990 and 2016 with a hypothetical trend. For this trend, it is assumed that between 1990 and 2016 there was no intensification in the international interconnectedness of all the countries studied. This means that the globalization-induced growth gains that resulted from the actual increase in globalization are eliminated. The results of this process can be explained by taking Germany as an example (see Figure 2).

- In 1990, real per capita GDP in Germany was around €21,940.
- By 2016, it had risen to €30,910 (an increase of €8,970).
- Real per capita GDP in 2016 would have only reached around €29,640 without increasing globalization as defined by the globalization index used here.
- As a result of increasing globalization, real per capita GDP in 2016 was therefore almost €1,270 more than it would have been without this increase in globalization.
- Over the whole period, per capita GDP gains totaled €29,900. Spread out across the 26 years, it means that increasing globalization raised the average per capita GDP in Germany by around €1,150 per year.
- This calculation was carried out for all 42 analyzed countries. Globalization-induced GDP gains were achieved in all countries.

FIGURE 2: **The development of real per capita GDP in Germany between 1990 and 2016, with and without increasing globalization,**
Information in euros
(Real = Prices in 2000)



Source: Prognos 2018.

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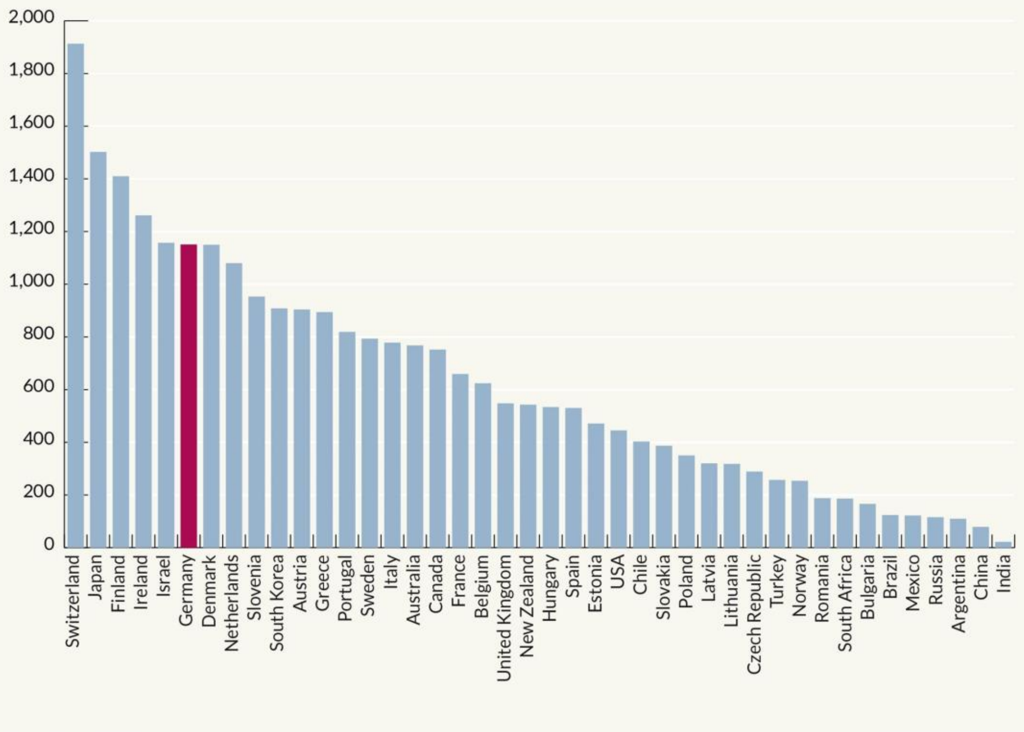
The points for the average annual gains in real per capita GDP due to globalization are very different (see Figure 3): The largest average income gains are found in Switzerland and Japan where they rose by an average of €1,900 and €1,500 per capita and year, respectively. Bringing up the rear when globalization gains are measured in this way are the large emerging countries, including the BRIC countries (Brazil, Russia, India, China). Accordingly, the average per capita GDP gains in China due to globalization are only around €80 per year, while in India they are as little as €20.

Fundamentally, there are three reasons that the gains in income from increasing globalization vary so much:

- First, the absolute amount of growth gains brought about as a result of globalization depends on how high per capita GDP was to begin with. If GDP started at a level of €1,000, then a ten percent increase in income would lead to a gain of €100 in GDP. If GDP started at a level of €10,000 and increases by only two percent, the increase of €200 is a larger gain in absolute terms.
- A second important influential factor is the change in globalization during the analyzed period: The greater the globalization index rises during the period, the higher the growth gains due to globalization are. Countries which already had a high score on the index have only a little room for further globalization gains. Belgium therefore occupies only a position in the middle of the rankings for GDP gains due to globalization.
- Finally, the time of the gains in the globalization index also plays an important role. If a country increases its score on the index only in the last year of the period under review, then that country can only achieve globalization-induced growth gains in that single year. By contrast, if the country increases its level of globalization in the first year of the period under review, then this places per capita GDP on a higher level, which can be maintained during all subsequent years, generating globalization-induced income gains every year.

FIGURE 3: **Average annual gain in real per capita GPD due to increasing globalization between 1990 and 2016,**
Information in euros (Real = Prices in 2000)



Source: Prognos 2018.

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Comparison with the Globalization Report 2016

The inclusion of two additional years has led to minor changes in the amount and ranking of globalization gains compared to the "Globalization Report 2016" (see Bertelsmann Stiftung 2016):

- In the "Globalization Report 2014", a gain of one point on the globalization index led to an increase of 0.35 percentage points in the growth rate for real per capita GDP. This was only 0.31 percentage points in the "Globalization Report 2016." In 2016 we viewed a possible explanation for the low growth effects of increasing globalization to be that the volume of world trade fell as a result of the global financial and economic crisis and had grown more slowly since then in comparison to before the crisis. Therefore, domestic demand became more important for economic development, meaning that GDP growth due to globalization was lower. In the latest Globalization Report, an increase of one point in the globalization index led to an increase of 0.33 percentage points in the growth rate for real per capita GDP. Thus, the average annual gains in real per capita GDP in most countries due to globalization denominated in euros is also higher than in the "Globalization Report 2016."

- There have been only a few changes in the ranking of GDP gains due to globalization as compared to the 2016 report. The order of the three countries with the highest gains is now "Switzerland – Japan – Finland." Compared to the calculations in 2016, Switzerland and Japan have switched places. One reason for this change is the fact that Switzerland was able to increase its international integration in the two added years (2015 and 2016), while Japan's degree of globalization declined (see Figure 1).

- Shifts by four places or more can be seen in Slovenia, New Zealand, Norway and the Netherlands. These shifts are mainly due to above- and below-average dynamics in the globalization index and in economic growth over the two new years added. In the case of New Zealand, revised data from the World Bank for the early 2000s is also included.

Further reasons for differences in the level and ranking for GDP gains which can be attributed to globalization are data revisions and changes in exchange rates.

Implications for economic policy

The Bertelsmann Stiftung takes the results of the "Globalization Report 2018" to draw three main conclusions for economic policy

1. The developments in recent years show that slowing or even a reversal of global interconnectedness between countries has a negative impact on economic growth. Economic isolationist efforts, expressed for example by protectionist measures, are made at the cost of citizens' economic well-being.

2. Developed industrialized countries continue to benefit most from globalization because increasing globalization generates the largest per capita GDP gains for them in absolute terms. However, the industrialized countries also started with significantly higher scores in per capita GDP. The income gap in absolute terms between industrialized countries on the one hand and emerging or developing countries on the other has actually increased due to globalization. This growing income inequality poses a risk for the global economy because it could lead to louder calls for protectionist measures in the emerging and developing countries that are negatively affected. This would have a negative impact on all countries, in particular export countries

such as Germany.

3. The growing popularity of globalization-critical parties and politicians in many Western industrialized countries is partly due to the fact that the benefits of globalization are not enjoyed by all citizens of a country. This development can also lead to growing protectionism.

However, turning our backs on globalization would take us down the wrong path. On the contrary: it is precisely the emerging and developing countries which have achieved only below average levels in the globalization index thus far and therefore still have great potential to globalize. By doing so, they could generate correspondingly high globalization-induced growth effects. This is why it is essential that emerging countries become better integrated into the global economy.

For this to happen it is important for emerging countries to open up more wherever reasonable in their respective situation, and to reduce trade barriers and capital controls. In turn, industrialized countries should open up their markets to products from less developed countries, without immediately demanding that these countries do the same, since less developed economies are often not yet competitive in this area.

Additionally, industrialized countries should reduce or do away completely with their subsidies for agricultural products in order to end the distortion of competition associated with these subsidies and their impact on emerging countries, which are more dependent on agriculture. At the same time, industrialized countries should provide less developed economies with financing opportunities, so that these countries can fund the infrastructure, the education and training, and the production facilities they need, including the necessary technologies.

Finally, in industrialized countries, it is necessary to spread the benefits of globalization more widely so that social acceptance of an open society is not lost. Many policy areas are implicated here: social security systems, structural and regional policy, the entire education system and the tax and transfer system. The goal must be to let all members of society participate in the benefits of globalization.

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