

“Building Resilience”

A comparison of eight OECD countries

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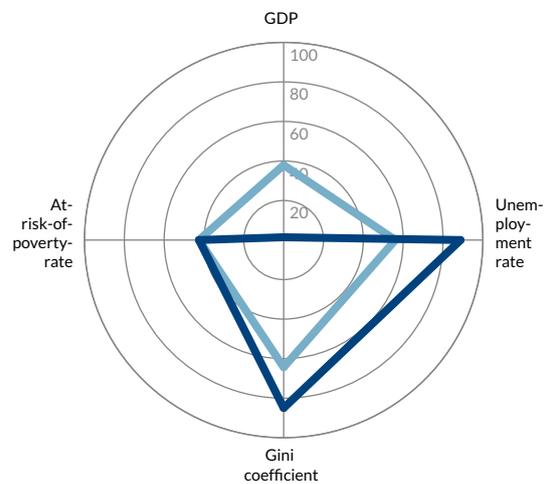
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Abstract

Increasing resilience is one of the top priorities of global economic policy. In a comparison of eight industrialized countries, a quite varied picture emerges. On four dimensions of performance (growth, unemployment, protection against poverty and distribution), Japan and Australia show considerable resilience in the context of crisis. France and Italy demonstrate a low level of resilience. The United States does little to serve as a role model for Europe with regard to resilience; while growth rates have been successfully stabilized there, crises have been accompanied by increases in inequality.

The figure examines Germany’s performance in the context of crisis. Performance is measured using a pre- and post-crisis comparison. In comparison to the average of the here considered countries, Germany has coped with crises well with regard to consequences for distribution and unemployment. The consequences of a crisis with regard to poverty risks correspond with the country-sample average. In past decades, Germany has performed somewhat below the average level with regard to stabilizing growth. However, this improved significantly with the financial crisis.

Crisis resilience in Germany



— Germany — Average of countries
Source: Own calculations based on OECD data.
High values within each of the various dimensions indicate a high degree of resilience to export-sector crises.

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1 Resilience – a strategy for economic policy making

Increasing economic resilience is one of the top priorities for national economies and for the global economy as a whole. Also for the G-20 summit in Hamburg, the German presidency has placed “Building Resilience” at the top of the agenda (G20 Germany 2016).

For good reason, the concept of resilience has become one of the guiding principles of economic-policy strategy development. If economic crises can never be perfectly eliminated even with the most careful preventative policies, it is vital to develop capabilities enabling crises to be handled as well as possible (Brinkmann et al. 2017).

But how do major industrialized countries perform today with regard to resilience? This analysis examines these questions for a specific type of crisis, the export-sector crisis. Here, resilience is measured on the basis of pre- and post-crisis comparisons of the following four performance indicators: the growth rate, the unemployment rate, the at-risk-of-poverty rate and the Gini coefficient. This selection reflects a dual societal objective that includes an orientation toward growth as well as toward social protection (“inclusive growth”).

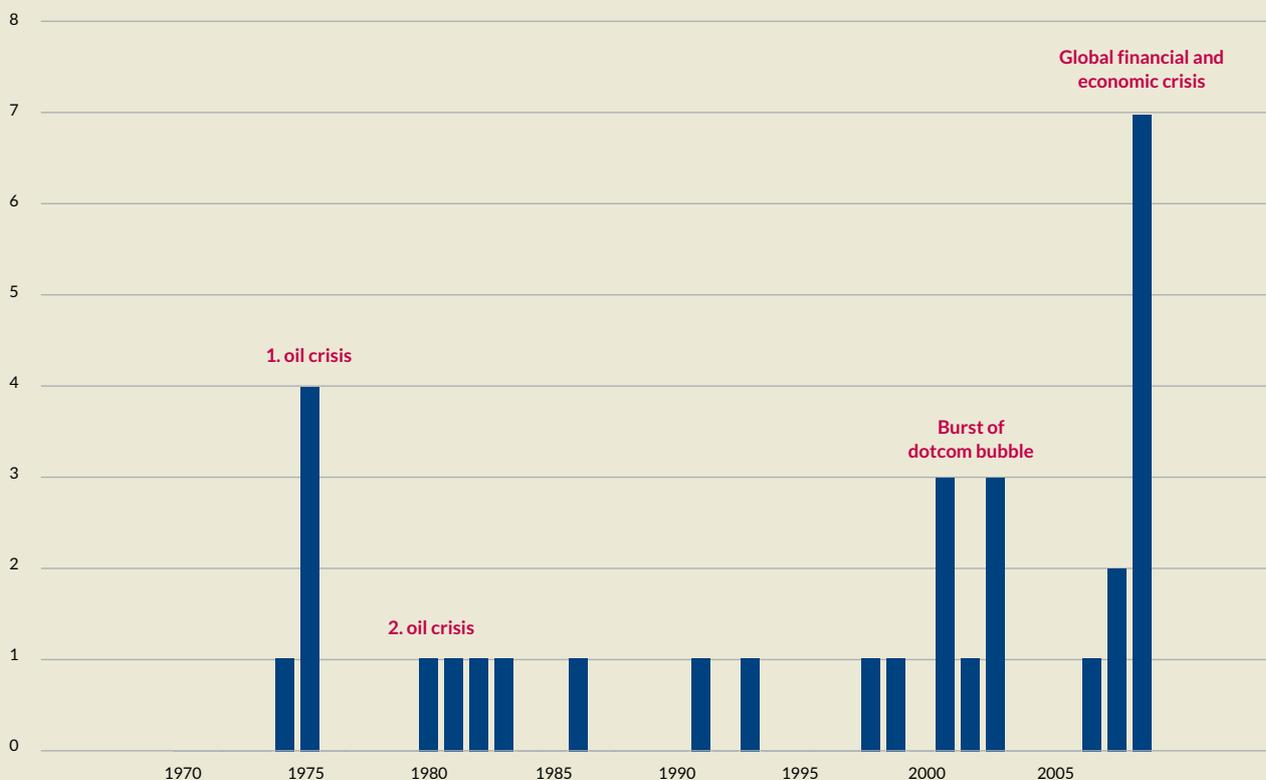
The resilience test includes all significant export-sector crises since the 1970s. This enables the illumination of long-term crisis-management patterns within the observed economies that are not immediately evident when examining individual current crises.

2 Overview of export-sector crises

Over recent decades, the industrialized world has repeatedly been shaken by external-sector shocks. In order to compare the degree to which countries have individually been affected by crises, a uniform definition of the crisis event is useful. An export-sector crisis is defined here as a decline in exports relative to GDP of at least a quarter of a percentage point. This seemingly moderate deterioration in export performance is to be interpreted in the context of the strong growth in world trade over recent decades. For

example, the German exports-to-GDP ratio increased by an annual average of 1.29 percentage points between 1970 and 2016. Against this background, a year with a decline of at least 0.25 percentage points represents a significant setback relative to the export-growth trend. Figure 1 shows the yearly number of economic crises as identified in this way for the G-7 countries and Australia. Significant clusters can be observed during the years of the oil crises, the dot-com crisis and the global financial and economic crisis.

FIGURE 1: Number of export-sector crises per year



Source: Own calculations based on OECD data.

TABLE 1: Number of export-sector crises per country

Country	Crisis period	Number
Australia	1981, 1983, 2003	3
Germany	1975, 1993, 2009	3
France	1975, 2009	2
United Kingdom	1975, 2007, 2009	3
Italy	1980, 1991, 1999, 2002, 2003, 2008, 2009	7
Japan	1986, 1998, 2001, 2009	4
Canada	1974, 1975, 2001, 2003, 2008, 2009	6
United States	1982, 2001, 2009	3

Source: Own calculations based on OECD data.

The crises vary in strength across the countries. The total number of crises varies between a high number in Italy, which has been particularly strongly affected, and only two crises in the case of France.

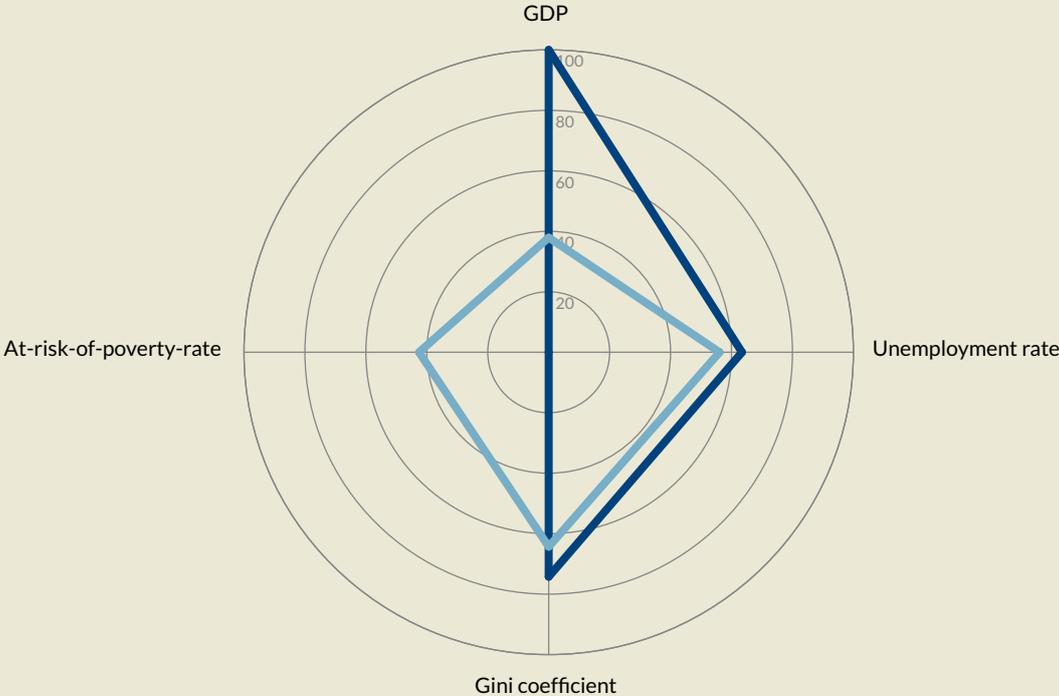
3 Resilience in cross-country comparison

Methodology of pre- and post-crisis comparison

An economy's resilience is reflected in its performance during and in the aftermath of a crisis. In order to do justice to the societal objective of inclusive growth, the following evaluation of performance includes four measures of welfare: the growth rate of the real gross domestic product (GDP), the unemployment rate, the at-risk-of-poverty rate, and the Gini coefficient for disposable income.

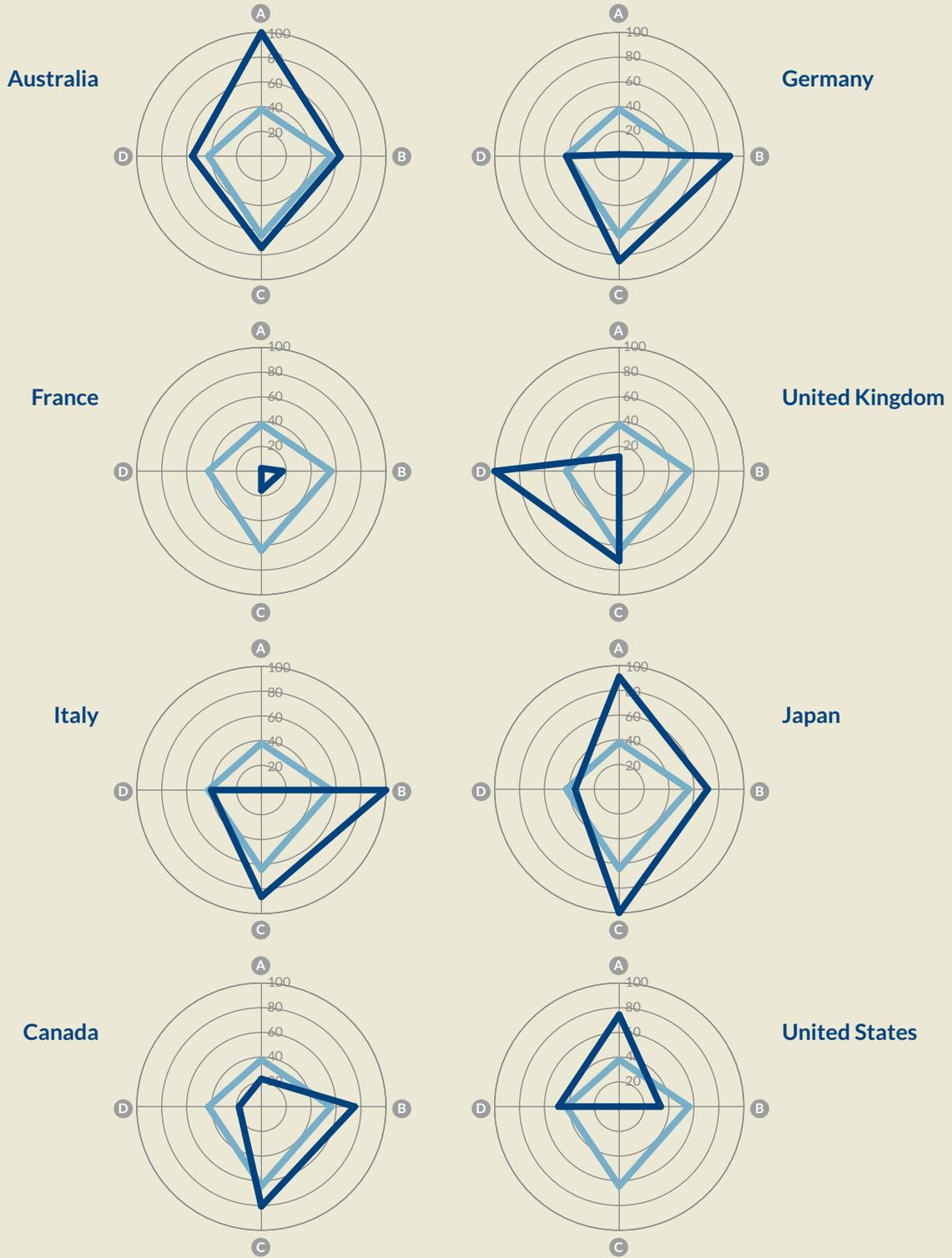
An examination of resilience should be oriented toward the medium term. A high degree of resilience is thus demonstrated if, in the event of a crisis, recovery can be achieved after a few years even after a significant performance degradation. For this reason, resilience in the following discussion will be evaluated on the basis of a medium-term performance comparison. For example, GDP growth averaged across the first five post-crisis years will be compared with the five-year average before the crisis. Pre- and post-crisis trends for the unemployment rate, the Gini coefficient and the at-risk-of-poverty rate will be compared in a similar fashion.

FIGURE 2: Crisis resilience of a hypothetical country



— hypothetical country — Average of countries
Source: Own calculations based on OECD data.

FIGURE 3: Cross-country comparison of resilience to export-sector crises



Country X Average of countries A GDP B Unemployment rate C Gini coefficient D At-risk-of-poverty-rate
 Source: Own calculations based on OECD data.

In order to ensure comparability between the performance dimensions, values for each dimension were normalized on a 0 to 100 scale, on which 100 represents the best and 0 the worst value in cross-country comparison. Figure 2 shows this using a hypothetical country X. In this country, the GDP shows the strongest development in comparison to the average of all countries. By contrast, the value for the at-risk-of-poverty rate stands at 0, which means that in comparison to the other countries, poverty has either grown the most or declined the least. The two other performance measures fall close to the average of all countries. In general, the larger the surface area of the country’s four-pointed figure, the more strongly the affected economy was able to demonstrate its resilience.

Cross-country comparison

Using the above-outlined methodology, Figure 3 indicates how the G-7 countries and Australia have performed under conditions of export-sector crisis across each of the four welfare dimensions.

Even at first glance, it is clear that Australia and Japan are particularly robust countries that cope with export-sector crises comparatively well (in Japan’s case, with some qualifications with regard to the risk of poverty). By contrast, France’s profile is particularly unsatisfactory. In past years, this country has had little with which to combat external shocks; crisis consequences were evident across all four welfare dimensions even years after the end of a crisis. However, it should be noted that France was also affected by comparatively few crises (1975 and 2009). For Italy, also this analysis points to notorious weaknesses with regard to growth. The country has experienced the largest comparative declines in growth under conditions of export-sector crisis; however, it performs relatively well on the other welfare indicators. The United States also has a striking profile. Here, possibly due to active countercyclical policies, long-term crisis-related growth declines have been

avoided. However, crises do leave typically long-lasting traces in the United States in the form of rising income inequality.

Germany’s crisis resilience appears at first glance to be very similar to that of Italy. Distribution and the labor market develop at above-average rates in pre- and post-crisis comparison, while the growth consequences of export-sector shocks last longer than in the other countries being compared. Here, however, an in-depth analysis indicates a change over the course of time. Germany’s poor crisis performance with regard to growth was primarily in evidence during the 1975 and 1993 crises. In contrast, Germany handled its last crisis (the 2009 financial crisis) significantly better than the country average, even with regard to GDP growth. After the 2009 crisis, GDP growth was about 0.2 percentage points above its rate in the pre-crisis period, while for the other economies, it had fallen by about 0.3 percentage points.

4 Resilience-promoting factors

The reasons for these great differences in resilience between the industrialized countries have not been adequately understood to date. In the following, a number of country characteristics will be presented in an exploratory way, each of which could potentially contribute to an explanation:

Education level within the population, measured by the share of work force with tertiary education: Well-educated employees can be flexibly deployed, which increases the adaptive capability of an economy overall (Sondermann 2016).

The degree of regulation, as measured by the Index of Economic Freedom: A high degree of regulation hinders adaptation to changed circumstances. However, a high level of regulatory protection against dismissal for workers can potentially limit the short-term employment consequences of a crisis.

Size of state, measured by the ratio of state expenditure to GDP: A high public-spending ratio can on the one hand reinforce automatic stabilization in times of economic decline, and thus limit the negative consequences of a crisis. For example, Afonso et al. (2010) find a positive relationship between this factor and an even distribution of wealth. On the other hand, a high public-spending ratio comes at the cost of the private sector with its market-oriented adaptive capacities.

Fiscal flexibility, measured by the ratio of public debt to GDP: A high degree of flexibility improves the opportunity to engage in countercyclical stabilization policy, and should thus help to limit the negative growth and employment consequences of a temporary crisis. In addition, it improves the ability to provide security to groups hit particularly hard by the crisis.

An orientation toward innovation, measured by the ratio of state-funded R&D expenditure to GDP, and the ratio of

ICT investment to gross fixed-capital formation: A strong innovation orientation on the part of the state and businesses should help to compensate for crisis-related slumps in export markets through new processes and products.

In an examination of how these potential determinants of resilience manifest within countries with particularly high or low levels of resilience, the following findings emerge:

Countries with high resilience: As a very resilient country, Australia stands out with very low levels of state spending and a large amount of financial flexibility. Innovation orientation is above average for both the state and businesses. In contrast, the country is comparatively heavily regulated, and is at an average level with regard to its population's education level. Japan scores strongly with a very high education level among its populace. In contrast, the country is one of the most heavily indebted countries in the considered selection, despite a comparatively small public-spending ratio (Japan has also had a debt burden greater than Italy's since the end of the 1990s).

Countries with low resilience: As the least resilient country, France has two major handicaps with respect to these indicators. It is the country with the highest density of regulation, and also has the largest state sector. With regard to innovation orientation, a mixed picture emerges: State R&D efforts are strong, but the share of ICT within the country's private-sector equipment investment is below average. Italy is the textbook case of a country that occupies a very low position across all resilience indicators, while showing a very high degree of regulation, a poor education performance, a high level of state debt and a low innovation orientation.

Germany: With regard to the resilience factors, Germany shows only minimal variations from the country averages. The country has an above-average regulation density, which however remains far from the level reached by France or Italy. The below-average education level, meas-

TABLE 2: **Strength of resilience-promoting factors**

	Share of population with tertiary education	Economic Freedom Index	Public spending (as % of GDP)
Australia	51.90	16.57	0.00
Canada	100.00	97.24	37.79
France	47.84	0.00	100.00
Germany	37.42	38.67	57.18
Italy	0.00	3.04	74.53
Japan	92.65	33.15	18.81
Great Britain	65.36	100.00	35.32
United States	82.34	87.29	1.79
	Public debt (as % of GDP)	State-funded R&D expenditures (as % of GDP)	ICT investments (as % of gross capital formation)
Australia	0.00	55.58	69.96
Canada	56.35	23.73	37.12
France	37.21	100.00	26.53
Germany	31.27	96.71	15.12
Italy	100.00	7.25	0.00
Japan	95.75	12.99	3.01
Great Britain	31.66	0.00	75.30
United States	34.54	89.82	100.00

Notes: All indicators are normalized on a 0 to 100 scale. Observations are made for the third (or if not available, the second) year before each crisis, and subsequently consolidated as an average per country across all its crisis episodes. The current manifestation of the indicators can thus differ significantly from these historical average values in the run-up to crises taking place since the 1970s. Source: OECD und Fraser Institute (Economic Freedom Index).

ured by the tertiary education rate, must be seen in the light of the large significance of the strong dual educational systems. The state-financed R&D expenditures are at the top margin of the comparison. In contrast, Germany figures among the countries with relatively low levels of ICT at the point in time before earlier crises.

5 Looking for resilience strategies

The major industrialized countries differ significantly from one another with regard to their resilience in the face of economic crises. Japan and Australia display good performance with regard to nearly all welfare measures. In Germany, Italy and Canada, unemployment figures and the distribution of wealth (measured by the Gini coefficient) react more robustly to crises than is the case in other countries; however, GDP declines to an above-average extent. A similar tendency can be observed for the United Kingdom, although unemployment figures rise more strongly there. Measures of welfare in the United States show a near-mirror-image development compared to trends in the European economies; in the United States, GDP is successfully and rapidly stabilized, but crises are associated with a significant increase in inequality. France shows particularly unfavorable development on all welfare measures, once again underlining the challenges faced by the new French president with regard to necessary reform policies.

The comparison of potential resilience-relevant characteristics, from educational levels to public debt to innovation orientation, fails to provide a uniform picture. In particular, a high regulatory density is associated with lower resilience only for certain countries – as in the case of France and Italy. Particularly resilient states such as Japan and Australia were also characterized by a comparatively high degree of regulation in the run-up to past crises. However, the combination of a high regulatory density with a high public-spending ratio is always associated with a low level of resilience. The combination of high levels of public spending and far-reaching regulations apparently influences an economy’s adaptive capability in a particularly negative way.

Against the background of these insights, any “one-size-fits-all” approach to the development of resilience strategies would seem to be misguided. Analyses of individual countries’ strengths and weaknesses are needed in order to understand the factors contributing to a poor ability to cope with crises. In this regard, differences in societal

objectives must also be taken into account. The type of resilience shown by the United States, where GDP is stabilized but crises are associated with increases in inequality, would be a politically acceptable blueprint for very few EU countries.

6 Literature

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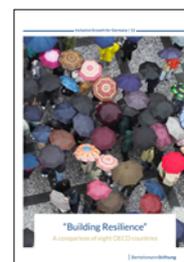
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“Inclusive Growth for Germany” is a publication series from the Bertelsmann Stiftung’s Shaping Sustainable Economies program. The German economy is as strong as ever. But growth in recent years has not been inclusive. Inequalities between groups of people, generations and regions have increased. In order to ensure the continuing success of the social-market-economy model, we must we must rethink the relationship between growth and a socially inclusive society. The series contributes to this important debate by analyzing current developments and offering feasible recommendations for action.

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