

SCIENCE **20**
BARO+
METER **21**

Dear reader,

We are very excited to present to you the results of the science barometer 2021. In the eighth year since the establishment of our project and in the fourth survey wave within the course of the coronavirus pandemic, the benefits of a regular science survey become clear: It is the only means that makes it possible to draw conclusions about developments and trends within public opinion on science and research in Germany.

Just like in previous years, the results show a high level of trust in science and research. While it is lower than in the beginning of the coronavirus pandemic in spring 2020, it is still higher than the levels of trust observed in 2017, 2018 and 2019. The relationship between scientists and politics is another aspect that has often been publicly discussed within the last one and a half years which is why we decided to explore the citizens' opinion on it. The results, some of which are truly surprising, will surely encourage further discussions about this topic.

The science barometer is made possible by our funders and supporters – the Robert Bosch Stiftung and the Fraunhofer-Gesellschaft – and by the collaborative work of our scientific advisory board. Thank you very much!

We wish you an inspiring read!



Markus Weißkopf, Managing Director
Wissenschaft im Dialog



Ricarda Ziegler, Project Lead
science barometer



What is the science barometer?

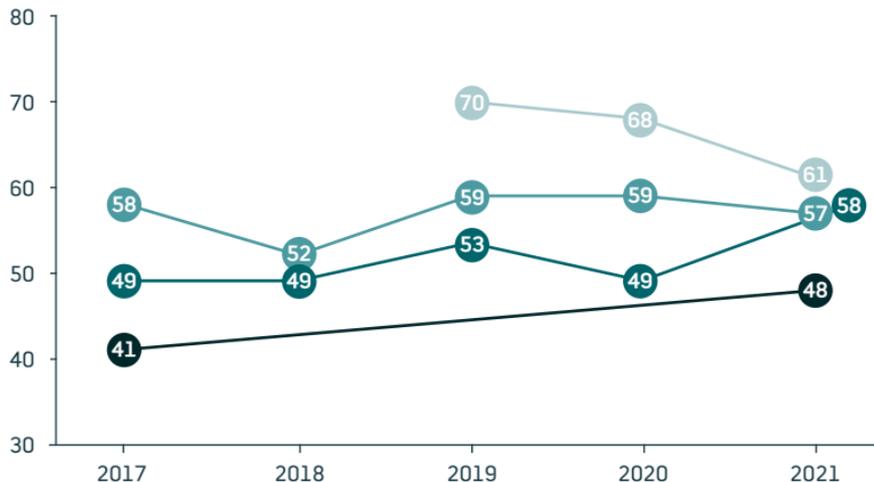
Through the science barometer, *Wissenschaft im Dialog* annually surveys public attitudes towards science and research in Germany. In close collaboration with a scientific advisory board a new questionnaire is designed each year which includes questions from previous survey waves but also new ones. For all results of the 2021 survey and all previous survey waves as well as further information, please visit www.sciencebarometer.com.

Who is responsible for the science barometer?

Wissenschaft im Dialog (WiD) is the German organisation for science communication of the scientific community. *WiD* supports science and research with expertise in effective communication with society and encourages researchers to communicate their research, including its controversial aspects, with the public. Moreover, *WiD* raises citizens' awareness of the social significance of science and promotes understanding of research processes and findings. For that reason, *WiD* organises various participatory formats, e.g. discussions, school projects, exhibitions, and competitions across Germany and provides online portals about science and science communication. The results of the science barometer help us in doing so.

www.wissenschaft-im-dialog.de

Interest in different news topics



Aggregated numbers for 'somewhat strong' and 'very strong' interest shown;
Minimum of 1.000 respondents each survey wave;
Figures are in per cent. Numbers may not add up to 100 per cent due to rounding.

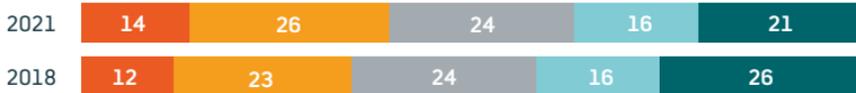
- local news
- science and research
- politics
- economics and finance

During the ongoing coronavirus pandemic, the interest in science and research remains on a similar level as in the previous years. 57 per cent of respondents show a somewhat strong or very strong interest in scientific topics. 30 per cent are partly interested and 12 per cent show a somewhat low or very low interest. Just like in previous years, the interest in local news is highest among the surveyed topics. In September 2021, shortly before the upcoming German federal elections, more respondents showed an interest in politics compared to previous years.

The science barometer 2021 shows a difference in the level of interest in scientific topics among men and women. This difference was prevalent in previous years as well. Currently, 68 per cent of male respondents state that they are interested in science and research compared to 47 per cent of female respondents.

How often ...

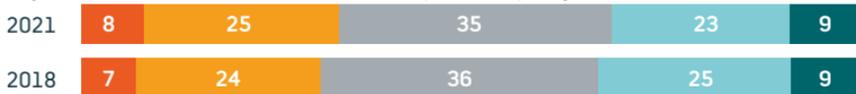
... do you get information about science and research on the internet?



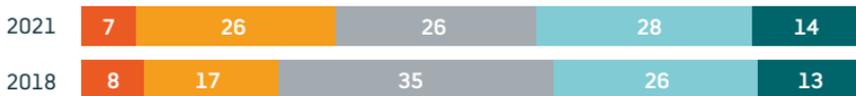
... do you watch TV programmes about science and research?
(regular programme, no streaming)



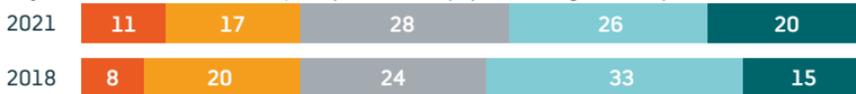
... do you talk about science and research with friends or family?



... does it happen that you listen to news or reports about
science and research on the radio?



... do you read articles on scientific topics in newspapers or magazines? (print)



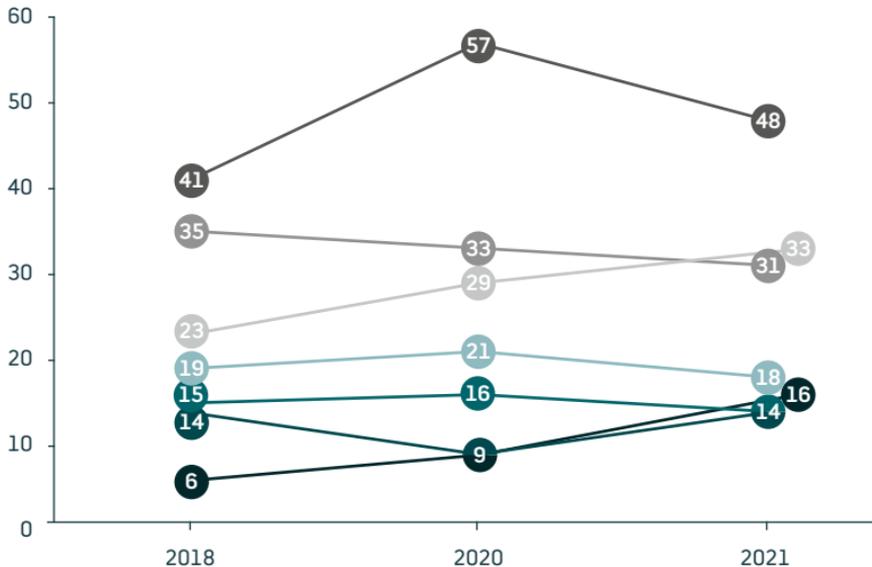
Minimum of 1,000 respondents each survey wave;
Figures are in per cent.
Numbers may not add up to 100 per cent due to rounding.

● very often ● often ● sometimes
● rarely ● never

While TV programmes were the source of information on science and research the largest share of respondents used often or very often in 2018, the internet takes their place in 2021.

Especially younger respondents as well as those with a high level of formal education inform themselves about science and research online. For the older generations and respondents with a low level of formal education, TV programmes and radio reports are the most relevant source of information on science and research.

Usage of different online sources for information about science and research



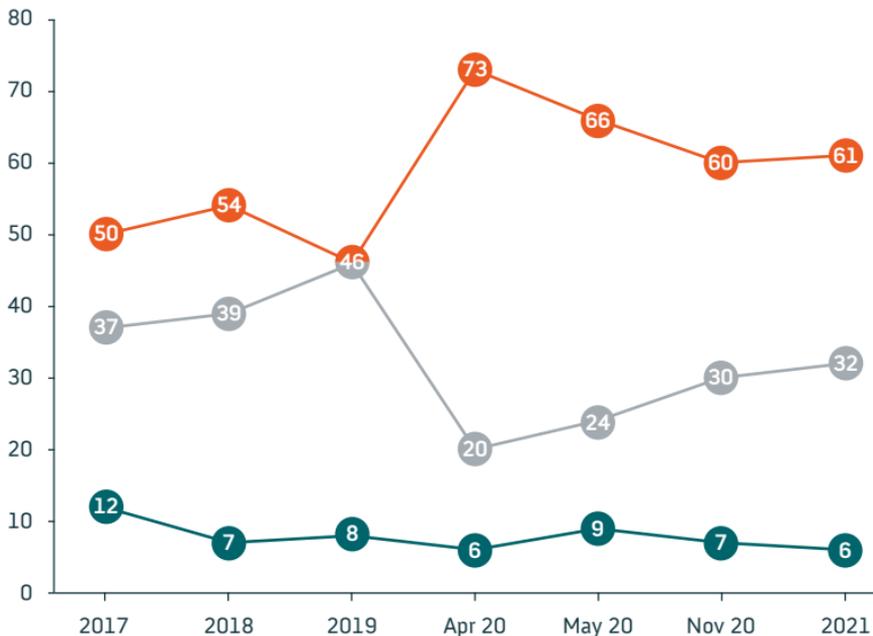
- websites of news media
- Wikipedia
- YouTube or other video platforms
- websites of scientific institutions or organisations
- Facebook, Twitter or other social networks
- blogs or online forums
- podcasts

Websites of news media are still the way through which most respondents (very) often come into contact with science and research online. Among respondents with a high level of formal education, this share is particularly high at 61 per cent.

The proportion of respondents that use video platforms such as YouTube (very) often to inform themselves about science and research has increased from 23 per cent in 2018 to 33 per cent in 2021. Within the group of 14- to 29-year-olds, it is currently 59 per cent. The proportion of respondents who listen to podcasts (very) often to find out about scientific topics also increased – from 6 to 16 per cent.

In all survey waves, about one out of five respondents states they inform themselves (very) often about science and research on the websites of scientific institutions. Here, the level of formal education makes a difference: Among the respondents with a low level of formal education 6 per cent use this source (very) often while 19 per cent of respondents with a medium and 29 per cent of respondents with a high level of formal education do so.

How much do you trust science and research?



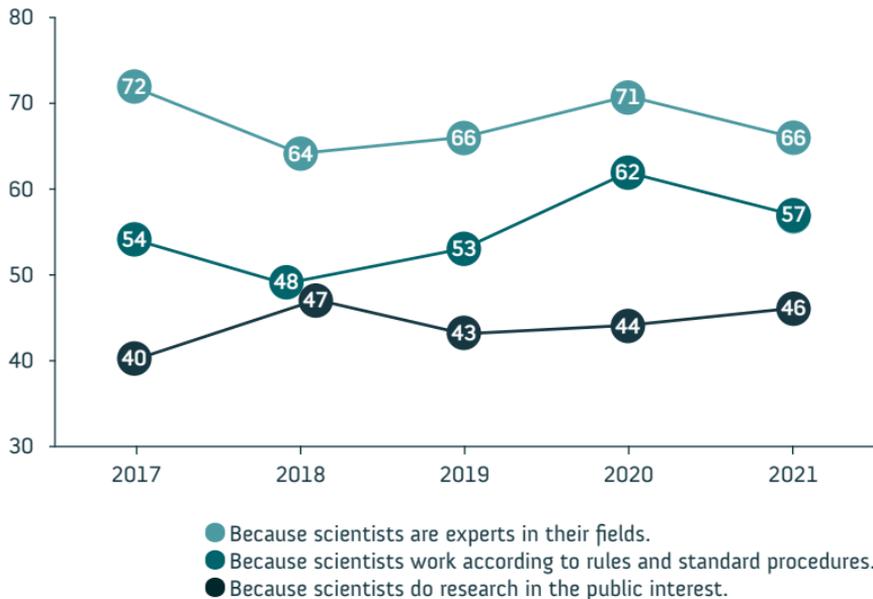
Numbers for 'don't know, missing answer' not shown;
Minimum of 1,000 respondents each survey wave;
Figures are in per cent.
Numbers may not add up to 100 per cent due to rounding.

● trust completely / trust somewhat
● undecided
● distrust somewhat / distrust completely

In September 2021, public trust in science and research in Germany is at a similar level as in November 2020. With 61 per cent of respondents the proportion of those stating that they somewhat or completely trust in science has shrunk since spring 2020 but is still greater than it was in 2017, 2018 and 2019. Just under one third of respondents are undecided while a relatively small proportion of respondents, comparable to previous years, state that they somewhat or completely distrust science and research.

Just as in previous years, trust in science and research is especially high among younger respondents (14 to 29 years: 78 per cent and 30 to 39 years: 80 per cent). This is also the case within the group of respondents with a high level of formal education – 80 per cent state that they somewhat or completely trust science and research.

Agreement with different reasons to trust scientists

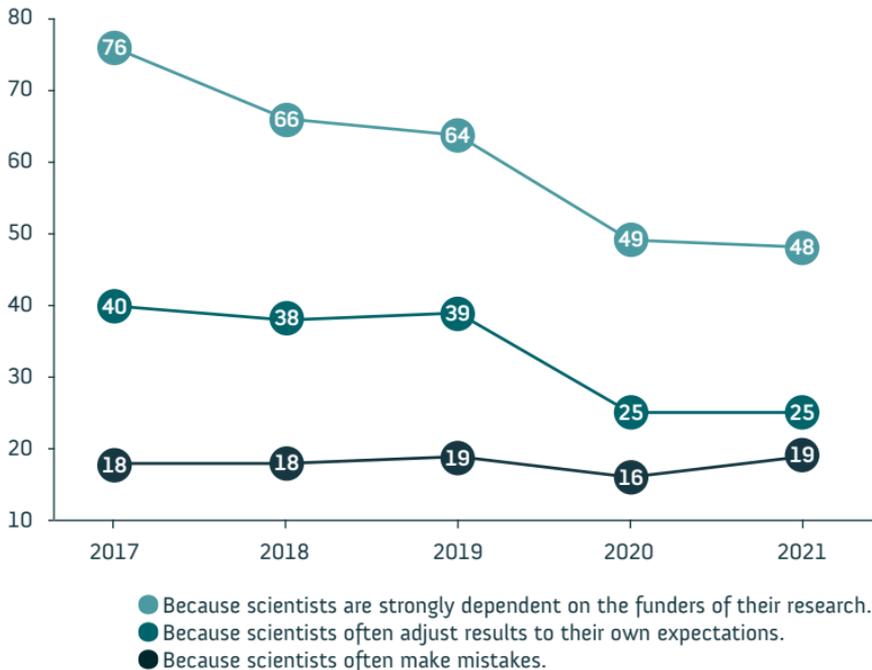


Aggregated numbers for 'somewhat agree' and 'completely agree' shown;
Minimum of 1,000 respondents each survey wave;
Figures are in per cent. Numbers may not add up to 100 per cent due to rounding.

In September 2021, the expertise of scientists is still a reason for the largest proportion of respondents (two thirds) to trust them. 57 per cent of the respondents agree somewhat or completely that scientists can be trusted because they work according to rules and standards. For almost half of the respondents, the orientation of scientists towards the common good is a reason to trust them.

In accordance with their higher levels of trust in science and research (see p. 11/12), respondents below the age of 40 as well as respondents with a high level of formal education also agree particularly strongly with the statements on scientists' expertise and their adherence to rules and standards as reasons to trust them. No such differences have been observed in the perception of scientists' orientation towards the public good as a reason to trust them.

Agreement with different reasons to distrust scientists



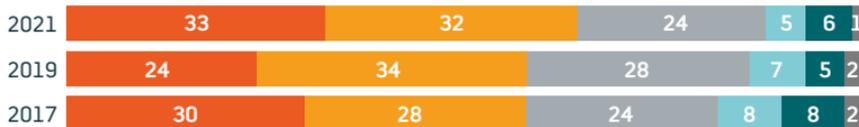
Aggregated numbers for 'somewhat agree' and 'completely agree' shown;
Minimum of 1,000 respondents each survey wave;
Figures are in per cent. Numbers may not add up to 100 per cent due to rounding.

During the coronavirus pandemic, two of the three reasons to distrust scientists which are included in the science barometer have received less agreement from respondents than in previous years.

In 2021, the strong dependence of scientists on the funders of their research continues to be the reason to distrust scientists that most respondents – currently 48 per cent – agree with. At present, a quarter of respondents believe that scientists can be distrusted because they often adjust results to their own expectations. Similar to previous years, just under a fifth of respondents consider the fact that scientists often make mistakes to be a reason for distrusting them.

To what extent do you agree with the following statements?

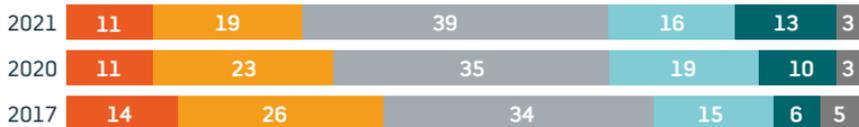
Even if it brings no immediate benefits, research which advances knowledge should be publicly funded.



Scientists work for the benefit of society.



Scientists put too little effort into informing the public about their work.



Minimum of 1,000 respondents each survey wave;
Figures are in per cent. Numbers may not add up to 100 per cent due to rounding.

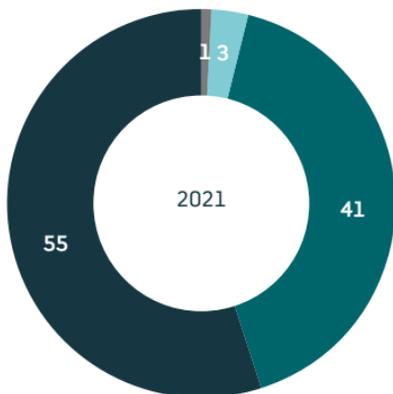
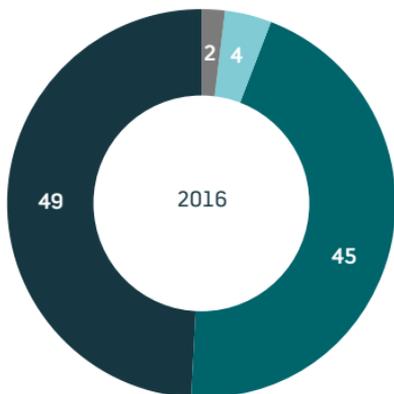
● completely agree ● somewhat agree ● undecided
● somewhat disagree ● completely disagree
● don't know, missing answer

Public funding of basic research is now favoured by more respondents than in 2017 or 2019. Currently, two thirds of respondents agree that research that brings no immediate benefits should still receive public funding. This especially applies to respondents with a high level of formal education (74 per cent). Among the group of respondents with a low level of formal education, 55 per cent agree, along with 66 per cent among respondents with a medium level of formal education.

In the science barometer 2021, half of the respondents agree that scientists work for the benefit of society. 39 per cent of respondents are undecided on that question.

In comparison to 2020 and 2017, less respondents – currently 30 per cent – feel that scientists in Germany put too little effort into informing the public about their work. The largest proportion of 39 per cent of respondents are undecided and 29 per cent completely or somewhat disagree.

If public expenditures have to be reduced, for example to avoid further public debt, how should spending on research be dealt with?



- If possible, public spending on research should not be reduced.
- Public spending on research should be reduced in the same proportion as public spending in other areas.
- Research should be one of the first areas where public spending is reduced.
- don't know, missing answer

The results of the science barometer 2021 show a strong support for publicly funded research in Germany: More than half of the respondents think that public spending on research should not be reduced, even if public expenditures have to be reduced generally. In 2016, 49 per cent thought so. Another 41 per cent are in favour of reducing expenditures on research in the same proportion as expenditures in other areas. In 2016, 45 per cent agreed with this. 3 per cent of respondents think that research should be one of the first areas where public spending is reduced (2016: 4 per cent). Currently, 61 per cent of men and 49 per cent of women agree that public spending on research should, if possible, not be reduced at all.

To what extent do you agree with the following statements?

It is right that scientists speak up in public when political decisions do not take research results into account.



Political decisions should be based on scientific evidence.



It is not up to scientists to get involved in politics.



- completely agree
- somewhat agree
- undecided
- somewhat disagree
- completely disagree
- don't know, missing answer

Number of respondents: 1.002;

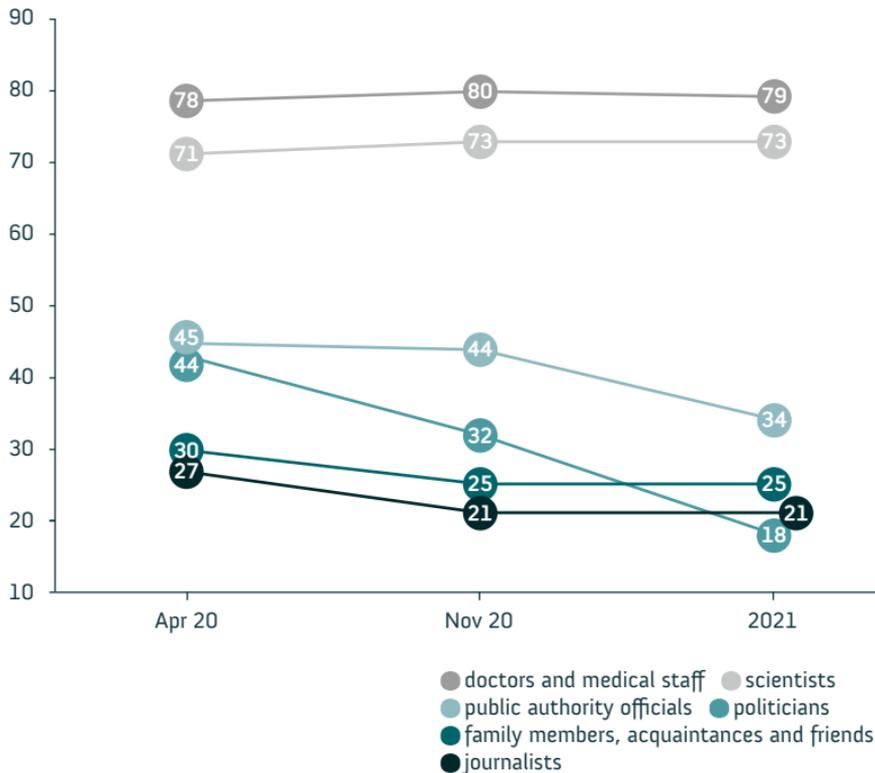
Figures are in per cent. Numbers may not add up to 100 per cent due to rounding.

Three quarters of respondents agree that scientists should generally speak up if political decisions do not take research results into account. In 2019, this statement was included in the science barometer within the context of the Fridays for Future/Scientists for Future protests for a change in climate policy. At the time, also 75 per cent agreed.

In the science barometer 2021, a good two thirds of respondents also support a general orientation of political decisions towards scientific findings. With direct reference to the coronavirus pandemic, agreement with this statement was surveyed in three waves of the science barometer in 2020. Here, the proportion of those agreeing lay between 73 and 81 per cent. In 2019, in the context of protests for a change in climate policy, this opinion was shared by a good half of respondents.

With regard to the question of whether scientists themselves should get involved in politics, the respondents are as ambivalent in the 2021 science barometer as they were in previous years.

Trust in statements on the coronavirus pandemic by different actors

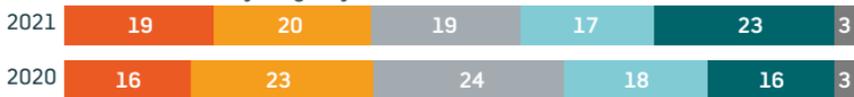


The public's trust in scientists and their statements in the context of the ongoing coronavirus pandemic remains high and is only surpassed by the trust in statements by doctors and medical staff. Regarding statements on the coronavirus pandemic by politicians and public authority officials, a clear decline in the public's trust can be observed.

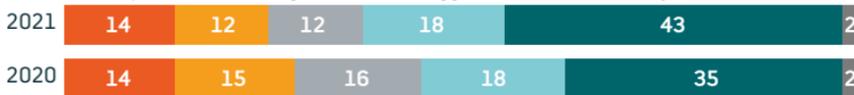
Aggregated numbers for 'trust somewhat' and 'trust completely' shown;
Minimum of 1.000 respondents each survey wave;
Figures are in per cent. Numbers may not add up to 100 per cent due to rounding.

To what extent do you agree with the following statements?

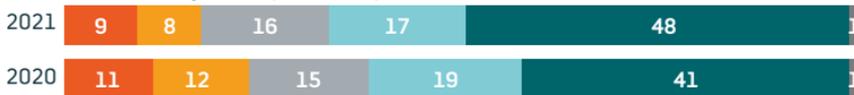
Scientists do not tell us everything they know about the coronavirus.



The coronavirus pandemic is being made into a bigger deal than it actually is.



We should rely more on common sense when dealing with the coronavirus pandemic and we do not need any scientific studies for this.



There is no real proof that the coronavirus really exists.

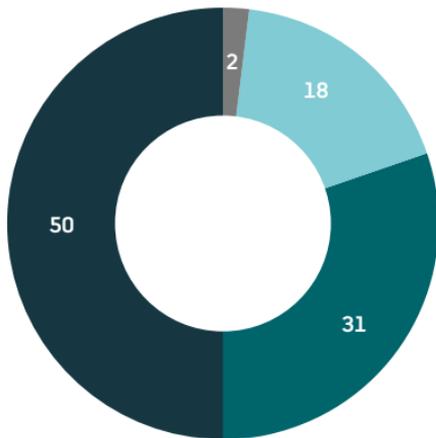


Minimum of 1,000 respondents each survey wave;
Figures are in per cent. Numbers may not add up to 100 per cent due to rounding.

● completely agree ● somewhat agree ● undecided
● somewhat disagree ● completely disagree
● don't know, missing answer

In September 2021, the agreement with statements that contain sceptical positions also towards scientists in the context of the coronavirus pandemic is similar or even slightly below the level of agreement in November 2020. All the statements shown are more frequently agreed with by older respondents and by respondents with a lower level of formal education.

What role should scientists in Germany play in political decision-making processes on the coronavirus pandemic?



- Scientists should recommend certain policy decisions to politicians based on scientific evidence.
- Scientists should present politicians with a range of options for decision-making and explain consequences, but not recommend specific policy choices.
- Scientists should limit themselves to informing politicians about scientific evidence.
- don't know, missing answer

When asked about the role they would like scientists to play in policy-making on the coronavirus pandemic, half of the respondents answer that scientists should recommend certain decisions to politicians based on scientific evidence. 31 per cent think scientists should explain options for decision-making and their consequences to politicians, but not make recommendations. 18 per cent think scientists should only inform politicians about scientific evidence.

Against the background of the current developments surrounding the coronavirus pandemic, to what extent do you agree with the following statements?

I have an idea of the influence that advice from scientists has on political decisions.



I have an idea of how the scientists who advise politicians are selected.



Number of respondents: 1,002;
Figures are in per cent. Numbers may not add up to 100 per cent due to rounding.

● completely agree ● somewhat agree ● undecided
● somewhat disagree ● completely disagree
● don't know, missing answer

In the context of the coronavirus pandemic, 43 per cent of respondents somewhat or completely agree that they have an idea of the influence that advice from scientists has on political decisions in Germany. Slightly fewer respondents (36 per cent) say they are undecided, while 17 per cent say they have (rather) no idea.

A smaller proportion of respondents think they know how the scientists who advise politicians are selected. Here, 29 per cent say they have an idea. 27 per cent are undecided, and the largest share (39 per cent) say they have (rather) no idea.

Data on the survey design of the science barometer 2021

Representative population survey

Population	German-speaking residential population of the Federal Republic of Germany in private households from the age of 14 years and over
Number of respondents	1.002 respondents
Type and period of the survey	The interviews were conducted as telephone interviews (dual frame of landlines/mobile phones, 80:20) from 7 to 8 September 2021. The interviews were part of an omnibus survey carried out centrally by Kantar.
Sampling	The sampling was carried out according to ADM – i.e. using a telephone sample which was created by an initiative of the Arbeitskreis Deutscher Marktforschungsinstitute (ADM) using the Gabler-Häder-Verfahren and which also contains unlisted telephone numbers. Within the selected households from the landline sample, the target person was selected randomly. For the sample of mobile phones, no systematic selection of the target person took place since mobile phones are almost exclusively used by only one person.

- Implementation** The interviews were computer-assisted telephone interviews (CATI). The general working instructions, used by all interviewers at Kantar, were applied in order to conduct all the interviews consistently.
- Weighting and representativeness** The weighting took place in several steps: Firstly, a design weighting compensated for the different selection probabilities of the target persons caused by the numbers of landlines and mobile phone numbers as well as household sizes. Subsequently, the two samples of landlines and mobile phones were merged and weighted based on the characteristics of federal state, size of location, gender, age, occupation, formal education and household size. The weighting ensures that the structure of the sample on which the results are based matches the structure of the population. Therefore, the results of the survey are representative and can be generalised for the population within statistical margins of error. For this survey, the margin of error ranges from ± 1.4 (for a share of five per cent) to ± 3.1 (for a share of 50 per cent).
- Documentation** The original text of the questionnaire as well as result tables are available online via the following link: www.sciencebarometer.com. In order to reduce the length and complexity of the question texts for the survey as telephone interviews, no gender-neutral language is used in the questionnaire and correspondingly also in the results reporting on the science barometer, although *Wissenschaft im Dialog* supports and implements the use of such language in other contexts.

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