

Science and Technology

Report

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INTRODUCTION

Europe faces major structural challenges – globalisation, climate change and an ageing population. The economic downturn has made these issues even more pressing. On the 3rd of March 2010, the European Commission launched the Europe 2020 Strategy to go out of the crisis and prepare the EU economy for the next decade challenges – aiming to stimulate growth and create more and better jobs, while making the economy greener and more innovative¹.

The Lisbon Strategy's objective in 2000 for the EU to become a knowledge economy centred on an ambitious research and innovation agenda. Its goal was to contribute to making the European Union become by 2010 the most competitive and dynamic knowledge-based economy in the world. A major driving force behind growth and developments in science and technology is seen as effective investment in research and development (R&D) and in innovation.

In October 2001, a Eurobarometer survey on science and technology² showed a divergence between EU citizens and the goals set up by the European Union for science and technology and showed that there was a need to step up scientific information in order to motivate European citizens to become more involved in science.

In 2005 a new poll was commissioned to further assess the view Europeans have of science and technology³. It was shown then that there is a latent interest among European citizens for science and technology as well as an implicit demand for more information but that Europeans consider themselves poorly informed on issues concerning science and technology.

It was argued in 2005 that progress had clearly been made since 2001 in terms of basic scientific knowledge. The gap between science and society was shown to still exist, although the survey revealed a very positive and optimistic perception of what science and technology can actually do for humanity in terms of medical research, the improvement of the quality of life, as well as the opportunities for future generations.

¹ Lisbon Strategy evaluation document. Brussels, 2.2.2010 SEC (2010) 114 final
http://ec.europa.eu/growthandjobs/pdf/lisbon_strategy_evaluation_en.pdf

² Eurobarometer 55.2 "Europeans, Science and Technology" (2001).

³ Eurobarometer "Qualitative study on the image of science and the research policy of the European Union" (2008).

The original Lisbon Strategy was renewed in 2005 to clarify its scope and aims. In particular, the definition of four priority areas of research and innovation, investing in people/modernising labour markets, unlocking business potential, particularly of SMEs, and energy/climate change was an important step forward in providing greater focus⁴.

When reviewing the Lisbon treaty in 2010, looking at science and technology, there is evidence that many Member States have prioritised public R&D investments: in 20 Member States, the share of R&D in the total government budget increased between 2000 and 2007. However, disappointing performance of some Member States means that the EU overall R&D investment performance has only marginally improved since 2000, from 1.82% of GDP in 2000 to 1.9% of GDP in 2008.

Although the original Lisbon Strategy target of 3% GDP to be spent on R&D has not been met, tangible benefits are nonetheless apparent. Consensus is considered better, partnerships within the EU have been beneficial and there has been considerable investment. Yet, major problems of patchy implementation, poor communication and country variability remain. The EU's key challenge remains to make it more attractive for the private sector to invest in R&D in Europe rather than in other parts of the world.

With the Lisbon Strategy being revised in 2010, this Eurobarometer survey is undertaken at a timely moment. The objective is to assess European citizens' general attitudes towards science and technology, to see if this perception has changed significantly from 2005 and to see if it mirrors the effects of the Lisbon Strategy. The following points are analysed:

- European citizens' interest and level of information
- Image and knowledge of science and technology
- Attitudes towards science and technology
- Responsibilities of scientists and policy-makers
- Scientific studies and the role of women and young people
- Effectiveness of European scientific research

⁴ [*Facing The Challenge. The Lisbon strategy for growth and employment. Report from the High Level Group chaired by Wim Kok*](#), November 2004, Office for Official Publications of the European Communities, [ISBN 92-894-7054-2](#), (the Kok report).

The findings of this survey have been analysed firstly at EU level and secondly by country. The current survey has been significantly modified since previous surveys but where possible results will be compared with the 2005 survey⁵. Where appropriate, a variety of socio-demographic variables - such as respondents' gender, age, education and occupation - have been used to provide additional analysis. Many of the questions listed as topics above have also been used as key variables in the analysis to gain a deeper insight into Europeans' views on science and technology⁶. Where relevant results of other studies are also discussed⁷.

This Eurobarometer survey is commissioned by the European Commission's Directorate General (DG) for Research Training and Development, and is coordinated by DG Communication. It is carried out by TNS Opinion & Social network in February 2010. The methodology used is that of Eurobarometer surveys as carried out by the Directorate General for Communication ("Research and Political Analysis" Unit)⁸. A technical note on the manner in which interviews were conducted by the Institutes within the TNS Opinion & Social network is appended as an annex to this report. This note indicates the interview methods and the confidence intervals.

⁵ Special Eurobarometer 224 "Europeans, Science & Technology" (2005).

⁶ In some cases, due to the rounding of figures, displayed sums can show a difference of one point with the sum of the individual cells. Also, note that the total percentages shown in the tables of this report may exceed 100% where the respondent is allowed to give several answers to a particular question.

⁷ Special Eurobarometer 38.1 "Europeans, Science and Technology" (1992), Eurobarometer 55.2 "Europeans, Science and Technology" (2001), Candidate Countries Eurobarometer 2002.3 "Science and Technology" (2002) and Eurobarometer "Qualitative study on the image of science and the research policy of the European Union" (2008).

⁸ http://ec.europa.eu/public_opinion/index_en.htm

In this report, the countries are represented by their official abbreviations. The abbreviations used in this report correspond to:

ABBREVIATIONS

EU27	European Union – 27 Member States
BE	Belgium
BG	Bulgaria
CZ	Czech Republic
DK	Denmark
<i>D-E</i>	<i>East Germany</i>
DE	Germany
<i>D-W</i>	<i>West Germany</i>
EE	Estonia
EL	Greece
ES	Spain
FR	France
IE	Ireland
IT	Italy
CY	Republic of Cyprus*
LT	Lithuania
LV	Latvia
LU	Luxembourg
HU	Hungary
MT	Malta
NL	The Netherlands
AT	Austria
PL	Poland
PT	Portugal
RO	Romania
SI	Slovenia
SK	Slovakia
FI	Finland
SE	Sweden
UK	United Kingdom
HR	Croatia**
TR	Turkey**
CH	Switzerland***
IS	Iceland***
NO	Norway***

* Cyprus as a whole is one of the 27 European Union Member States. However, the "*acquis communautaire*" is suspended in the part of the country that is not controlled by the government of the Republic of Cyprus. For practical reasons, only the interviews conducted in the part of the country controlled by the government of the Republic of Cyprus are recorded in the category "CY" and included in the EU27 average. The interviews conducted in the part of the country not controlled by the government of the Republic of Cyprus are recorded in the category "CY(tcc)" [tcc: *Turkish Cypriot Community*].

** Croatia and Turkey are in 2010 candidate countries of the EU.

*** Switzerland, Iceland and Norway are not EU Member States but belong to the European Free Trade Association (EFTA).

EXECUTIVE SUMMARY

The key findings of this survey are that Europeans:

- ◆ express interest in new scientific discoveries and technological developments where 30% are very interested and 49% are moderately interested;
- ◆ mostly feel moderately (50%) informed about new scientific discoveries and technological developments, with few feeling very well informed (11%);
- ◆ are not active in public issues science and technology, where 91% of respondents never or hardly ever attend public meetings or debates;
- ◆ have a positive view about the image of science and technology but appear to have less clear insight into the work of the scientist;
- ◆ are optimistic about the effects of science and technology but marginally less so than in 2005;
- ◆ feel that scientists should take decisions about science but the public should be consulted;
- ◆ feel that scientists should communicate the message about science but that they are not very efficient in doing so;
- ◆ feel that governments should do more to encourage young people and women to be involved with science;
- ◆ are not clear about the current level of EU investment in research but feel that an increase in such investment would be beneficial;
- ◆ who are interested in and feel informed about new scientific discoveries are much more likely to have a positive view of science and technology than those who are not at all interested or who feel not at all well informed.

1. EUROPEAN CITIZENS' INTEREST AND LEVEL OF INFORMATION

1.1 Interest in science and technology

In order to gauge Europeans' views about science and technology we first analyse issues in everyday life and in the news, both scientific and non-scientific, in order to rate specifically their interest in science and technology.

We begin with an analysis of how interested European citizens feel about this range of issues and then look at how well informed they feel about these issues. Finally, we examine to what level Europeans feel that they are involved in a range of activities related to the scientific and non-scientific issues.

Overall respondents indicate that they are very or moderately interested and informed about everyday life issues. However, for science and technology- related issues, respondents have a slightly lower level of interest. Europeans feel that they should be more informed about scientific issues as they feel less well informed than their level of interest deserves.

The survey shows that people are generally not publicly active in science and technology. Only Europeans who are specifically interested in and most likely directly or indirectly involved in science and technology are more likely to be actively involved in public science and technology issues.

1.1.1: Interest in issues everyday life

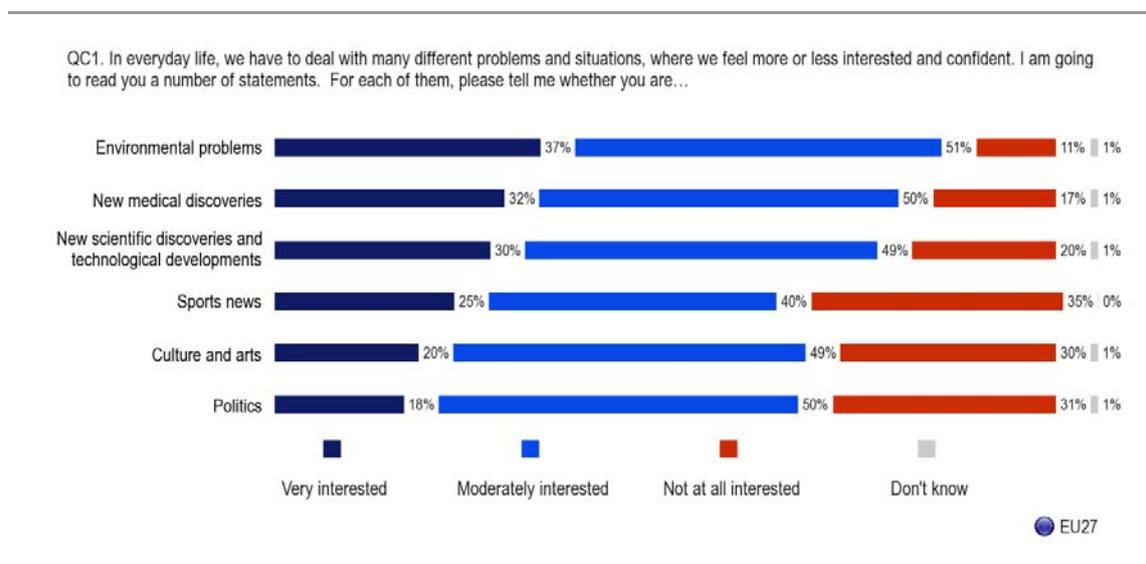
- Interest in new scientific discoveries and technological developments is relatively high but there are large country differences -

The survey asked respondents to indicate their level of interest in problems or situations concerning the following six themes: sports news, politics, new medical discoveries, environmental problems, new scientific discoveries and technological developments, culture and arts⁹.

⁹ QC1: In everyday life, we have to deal with many different problems and situations, where we feel more or less interested and confident. I am going to read you a number of statements. For each of them, please tell me whether you are very interested in, moderately interested in, not at all interested in or do not know ...
QC1.1 Sports news; QC1.2 Politics; QC1.3 New medical discoveries; QC1.4 Environmental problems; QC1.5 New scientific discoveries and technological developments; QC1.6 Culture and arts.

Results show that the interest in each theme is relatively high with more than two thirds of respondents being either very or moderately interested. The results are very similar to the 2005 survey¹⁰.

The figure below shows that environmental problems interest European citizens the most: 88% of respondents at the EU27 level are very or moderately interested, followed by new medical discoveries (82%) and scientific discoveries and technological developments (79%).



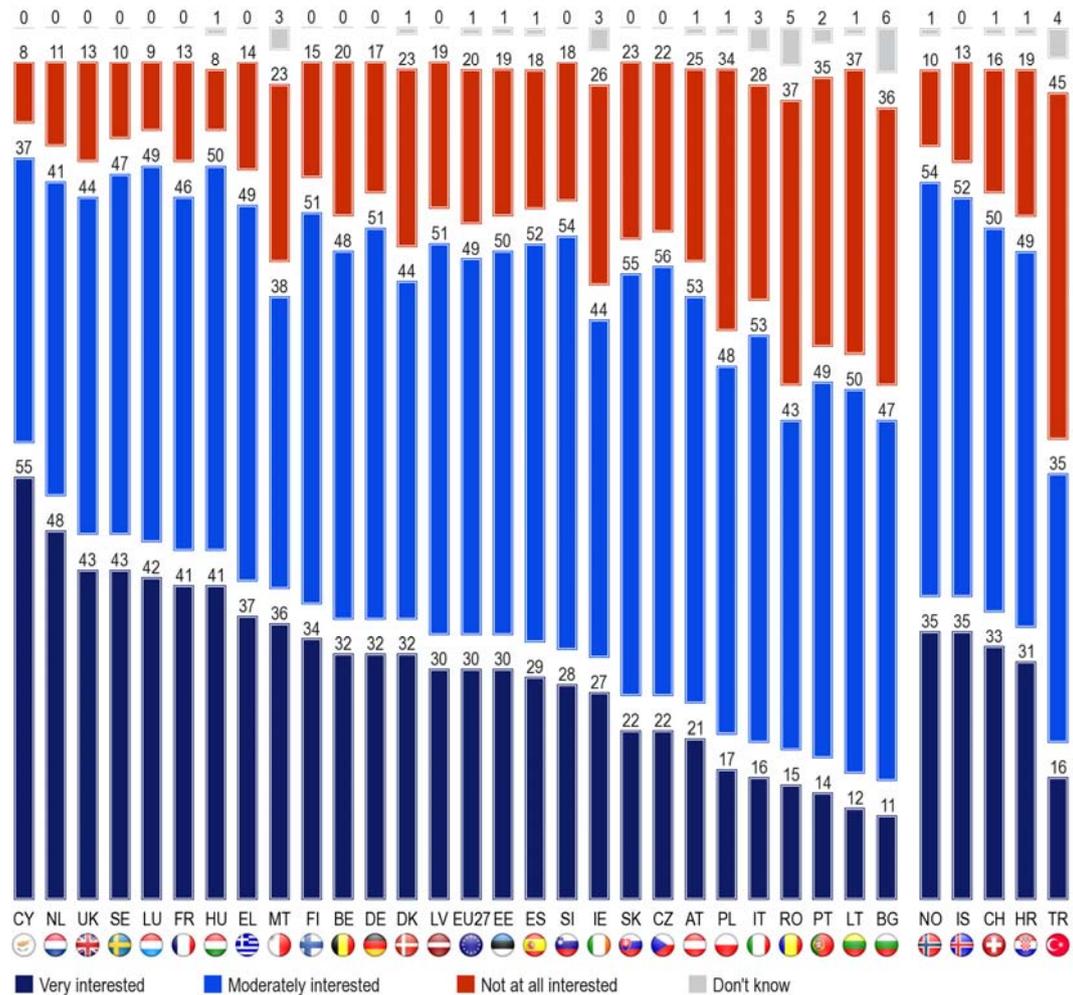
For the other themes, the percentages are somewhat lower, yet a majority still expresses interest: 69% are very or moderately interested in culture and arts, 68% of respondents consider themselves to be very or moderately interested in politics and 65% express interest in sports news.

Focussing specifically on new scientific discoveries and technological developments, we find that even though a high majority of 79% of respondents are very or moderately interested, country differences are marked. The graph below show that interest levels range from 51% in Turkey to over 90% in Cyprus (92%), Luxembourg and Hungary (91% each).

¹⁰ In Special Eurobarometer 224 "Europeans, Science & Technology" (2005) it is stated that respondents have a tendency to answer in a "socially acceptable" way and this is thought to explain why there are a large number of respondents answering 'moderately interested' for the different issues.

QC1.5. In everyday life, we have to deal with many different problems and situations, where we feel more or less interested and confident. I am going to read you a number of statements. For each of them, please tell me whether you are...

New scientific discoveries and technological developments



While on average one in five EU citizens (20%) is not at all interested in scientific discoveries and technological developments, there are six countries where more than one third of respondents are not at all interested in scientific discoveries and technological developments. The countries are Poland (34%), Portugal (35%), Bulgaria (36%), Romania and Lithuania (37% each) and finally Turkey, where 45% of respondents are not at all interested in scientific discoveries and technological developments.

Looking at the socio-demographic data, we see that certain categories are more interested in new scientific discoveries and technological developments than others. On the whole, men consider themselves to be more interested in scientific discoveries and technological developments, women much less so. Those with a higher level of education or still studying are also more likely to be interested. Managers most often express interest in new scientific discoveries and technological developments (93%). Amongst the different occupations, house persons and those in retirement show the lowest rates of interest. Respondents living in rural villages and non users of the internet are least likely to be interested in scientific discoveries and technological developments.

**QC1.5 In everyday life, we have to deal with many different problems and situations, where we feel more or less interested and confident. I am going to read you a number of statements. For each of them, please tell me whether you are...
New scientific discoveries and technological developments**

	Very interested	Moderately interested	Not at all interested	DK
EU27	30%	49%	20%	1%
Sex				
 Male	36%	46%	17%	1%
 Female	24%	51%	24%	1%
Age				
 15-24	34%	46%	19%	1%
25-39	32%	49%	18%	1%
40-54	30%	52%	17%	1%
55 +	27%	46%	25%	2%
Education (End of)				
 15-	19%	46%	34%	1%
16-19	27%	51%	21%	1%
20+	41%	48%	11%	-
Still studying	39%	45%	15%	1%
Subjective urbanisation				
 Rural village	29%	48%	22%	1%
Small/mid size town	29%	50%	20%	1%
Large town	33%	47%	18%	2%
Respondent occupation scale				
 Self-employed	34%	51%	14%	1%
Managers	45%	48%	7%	-
Other white collars	28%	53%	18%	1%
Manual workers	27%	52%	20%	1%
House persons	21%	49%	28%	2%
Unemployed	29%	46%	24%	1%
Retired	26%	45%	27%	2%
Students	39%	45%	15%	1%
Use of the Internet				
Everyday	40%	48%	12%	-
Often/ Sometimes	27%	54%	18%	1%
Never	21%	48%	29%	2%

In general, men more often express interest than women in all the issues and particularly when it comes to sport, 41% of men compared to 10% of women are very interested. However, when it comes to culture and arts the opposite is the case: women are more interested than men (23% vs. 16%, respectively).

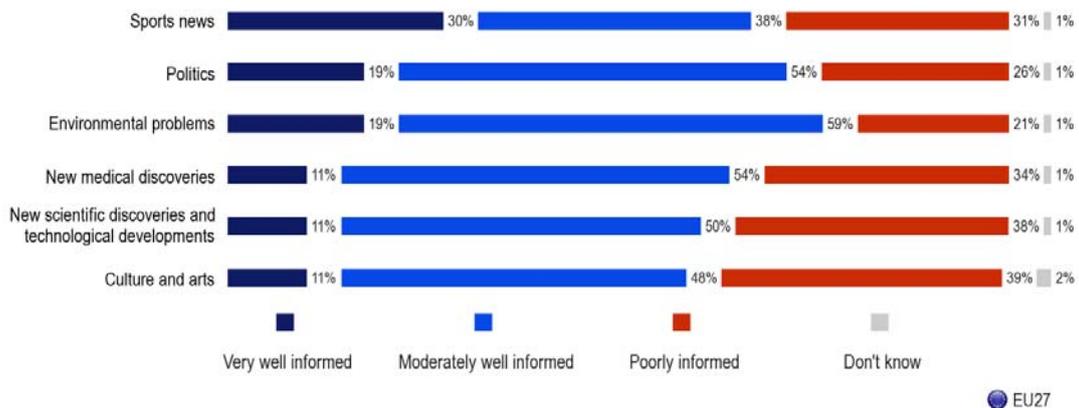
1.1.2: Informed about issues in everyday life

- Europeans feel less well informed than their level of interest demands. They are less informed now than in 2005. -

The survey asks respondents to indicate how well they feel informed about the six everyday issues already discussed above.¹¹

For all the issues, a majority of Europeans see themselves as being either very well informed or moderately well informed. On the whole, Europeans see themselves as more interested in the issues than they feel well informed. However, the rank order of the issues differs depending on whether we measure feeling well informed or feeling interested.

QC2. I would like you to tell me for each of the following issues in the news if you feel very well informed, moderately well informed or poorly informed about it.



The figure above shows that Europeans most indicate to feel well informed about environmental problems (78%), followed by politics (73%), sports news (68%), new medical discoveries (65%), scientific discoveries and technological developments (61%) and finally culture and arts (59%).

¹¹ QC2: I would like you to tell me for each of the following issues in the news if you feel very well informed, moderately well informed or poorly informed about it...

QC2.1 Sports news; QC2.2 Politics; QC2.3 New medical discoveries; QC2.4 Environmental problems; QC2.5 New scientific discoveries and technological developments; QC2.6 Culture and arts.

When we look at the level of interest of European citizens and compare this with how they feel informed we see that European citizens on the whole see themselves overall as more interested in the technical issues than they feel that they are well informed. Specifically, for new scientific discoveries and technological developments 79% of respondents at the EU27 level are moderately or very **interested**. However, when we look at how well European citizens feel informed then 61% of respondents at the EU27 level feel moderately or well **informed**. The same pattern is shown for new medical discoveries where 82% of respondents at EU27 are moderately or very **interested** while fewer respondents feel **informed** (65%).

For the general issues of sports and politics we find the opposite pattern and indeed it seems that there is an abundance of information that is in excess of the level of interest. For sports news, 65% of respondents are interested against 68% that feel well informed. The corresponding figures for politics are 68% interested against 73% well informed.

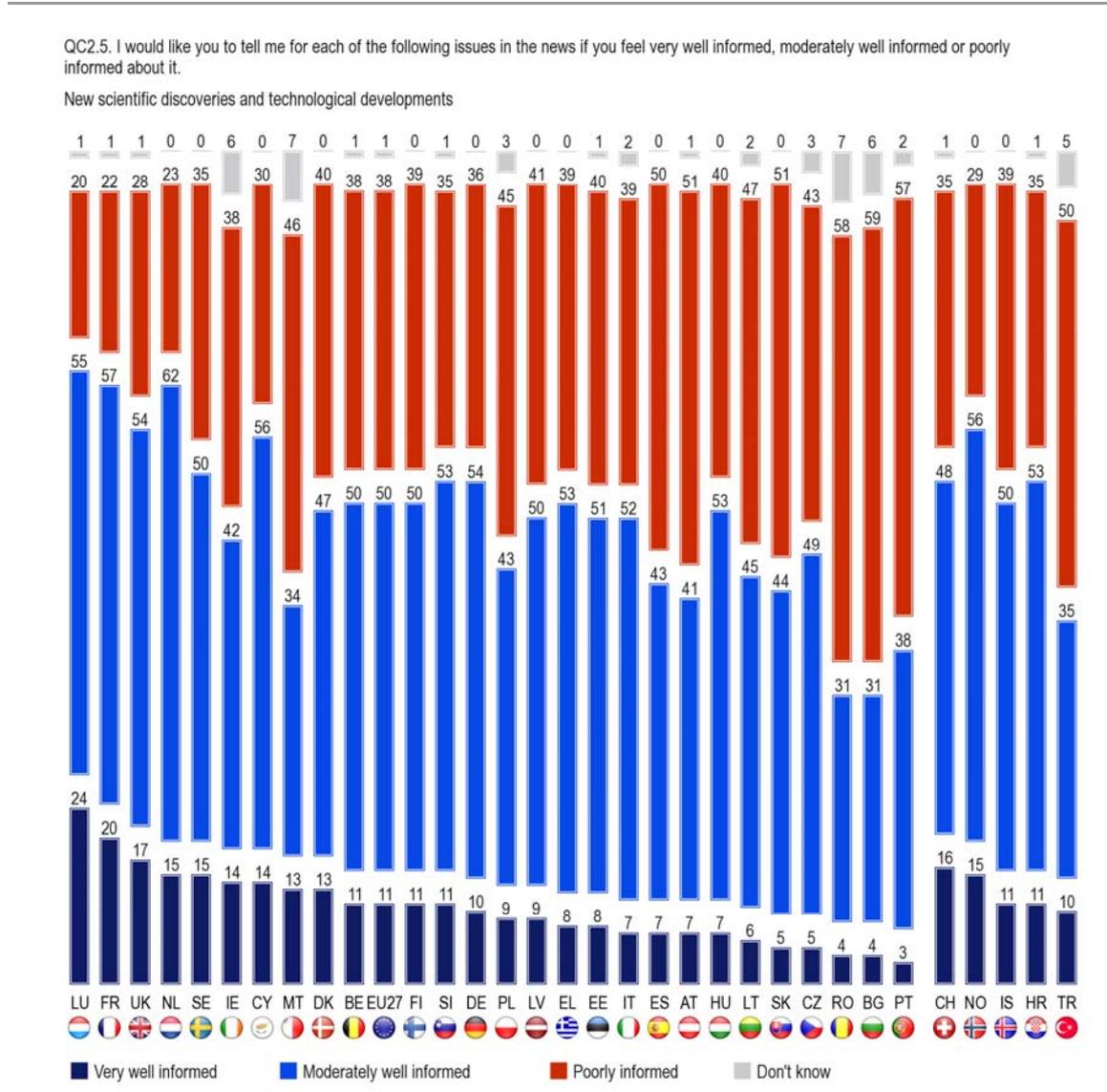
Europeans however consider themselves in 2010 to be slightly better informed about environmental problems than they were in 2005. In 2005, 15% of respondents felt very well informed and this has increased to 19% in 2010. We find a two percentage point decrease between 2005 to 2010 in the category of respondents that feel moderately well informed and those who feel that they are poorly informed.

When we compare findings for new medical discoveries in the 2010 study with those of the 2005 survey, 59% of respondents considered themselves in 2005 as being moderately well informed, in 2010 this is 54% of respondents. Those who consider themselves as being poorly informed about new medical discoveries has increased from 29% in 2005 to 34% in 2010. Overall European citizens in 2010 are slightly less informed about new medical discoveries than they were in 2005.

There is in 2005 no corresponding question about new scientific discoveries and technological developments. However, from the two subjects that are scientific and technical in nature mentioned above it seems that European citizens feel slightly less informed in 2010 than they were in 2005.

A focus on the level to which Europeans feel well informed about new scientific discoveries and technological developments in 2010 reveals large country differences.

The figure below illustrates the level to which respondents feel well informed about scientific discoveries and technological developments at the country level.



We see a range in those that consider themselves as poorly informed. Luxembourg at 20% of respondents and France at 22% of respondents have the lowest rates while six countries in the EU27 and one candidate country have now more than half of the respondents feeling poorly informed: Bulgaria (59%), Romania (58%), Portugal (57%), Austria (51%), Slovakia (51%) and Spain and Turkey (50%).

The socio-demographic analysis shows that some groups are more likely to feel very well informed than others: 20% of managers feel very well informed compared to the EU27 average of 11%. However, the most striking group consists of those respondents who are very interested in scientific discoveries: these Europeans are nearly three times as likely (28%) as the average European to feel very well informed about this issue.

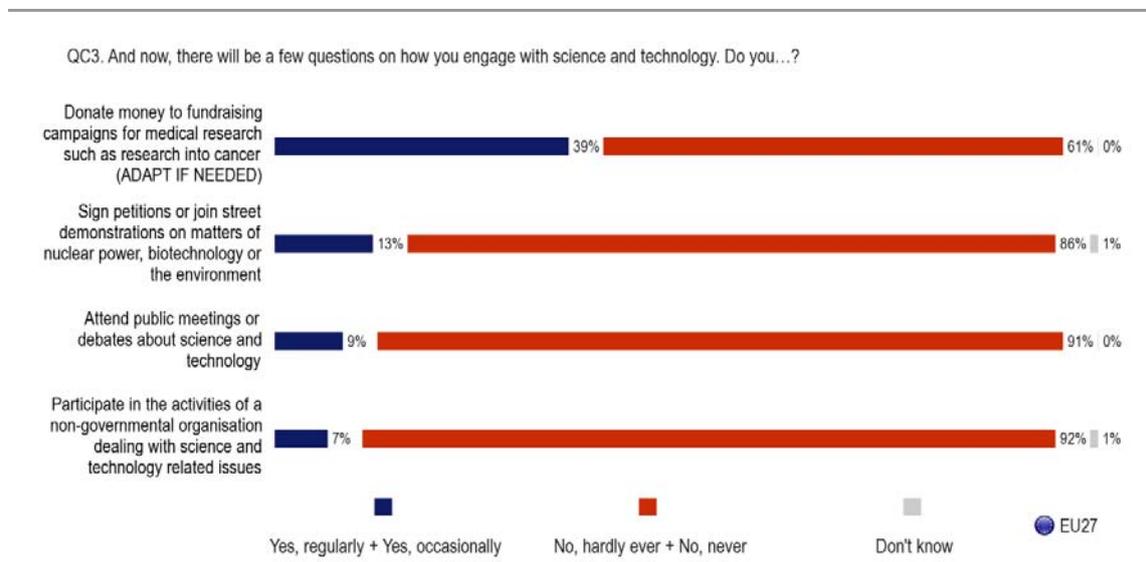
QC2.5 I would like you to tell me for each of the following issues in the news if you feel very well informed, moderately well informed or poorly informed about it.
New scientific discoveries and technological developments

	Very well informed	Moderately well informed	Poorly informed	DK
EU27	11%	50%	38%	1%
Sex				
 Male	14%	52%	33%	1%
 Female	8%	48%	42%	2%
Respondent occupation scale				
 Self-employed	11%	55%	33%	1%
Managers	20%	58%	22%	-
Other white collars	9%	55%	35%	1%
Manual workers	8%	51%	40%	1%
House persons	7%	42%	48%	3%
Unemployed	9%	47%	43%	1%
Retired	10%	44%	44%	2%
Students	17%	50%	31%	2%
Interested in scientific discoveries				
Yes, very	28%	59%	13%	-
Yes, moderately	4%	59%	36%	1%
No	1%	16%	80%	3%

1.1.3: Active interest in science and technology

- European citizens are not very active in science and technology issues –

The level of engagement of Europeans in science and technology is investigated by looking at how active or passive they are in four issues - attend public meetings or debates about science and technology, sign petitions or join street demonstrations on matters of nuclear power, biotechnology or the environment, donate money to fundraising campaigns for medical research such as research into cancer, and participate in the activities of a non-governmental organisation dealing with science and technology related issues¹².



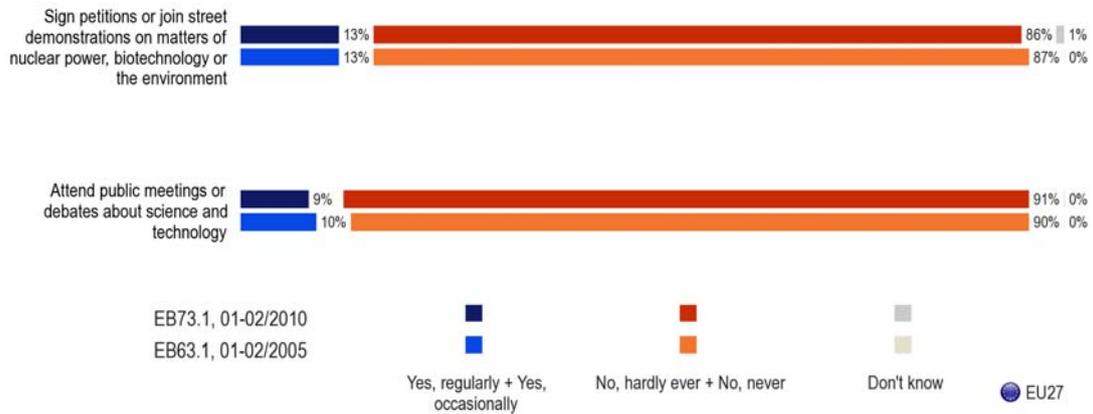
The figure above shows that Europeans are most active in donating money to fundraising campaigns for medical research such as research into cancer where 39% of respondents did so but 61% of respondents say that they never have done so. Only 13% of respondents engage in signing petitions or street demonstrations on matters of nuclear power, biotechnology or the environment but 86% of respondent never did this. Few Europeans (9%) attend public meetings or debates about science and technology, 91% of respondents never or hardly ever attend.

¹² QC3 And now, there will be a few questions on how you engage with science and technology. Do you...?
 QC3.1 Attend public meetings or debates about science and technology, QC3.2 Sign petitions or join street demonstrations on matters of nuclear power, biotechnology or the environment, QC3.3 Donate money to fundraising campaigns for medical research such as research into cancer, QC3.4 Participate in the activities of a non-governmental organisation dealing with science and technology related issues.
 Responses: Yes, regularly; Yes occasionally; No, hardly ever; No, never; Don't know.

Finally, being involved in the activities of a non-governmental organisation dealing with science and technology related issues is of little interest to European citizens where 92% of respondents hardly or never are active and only 7% of respondents ever did so.

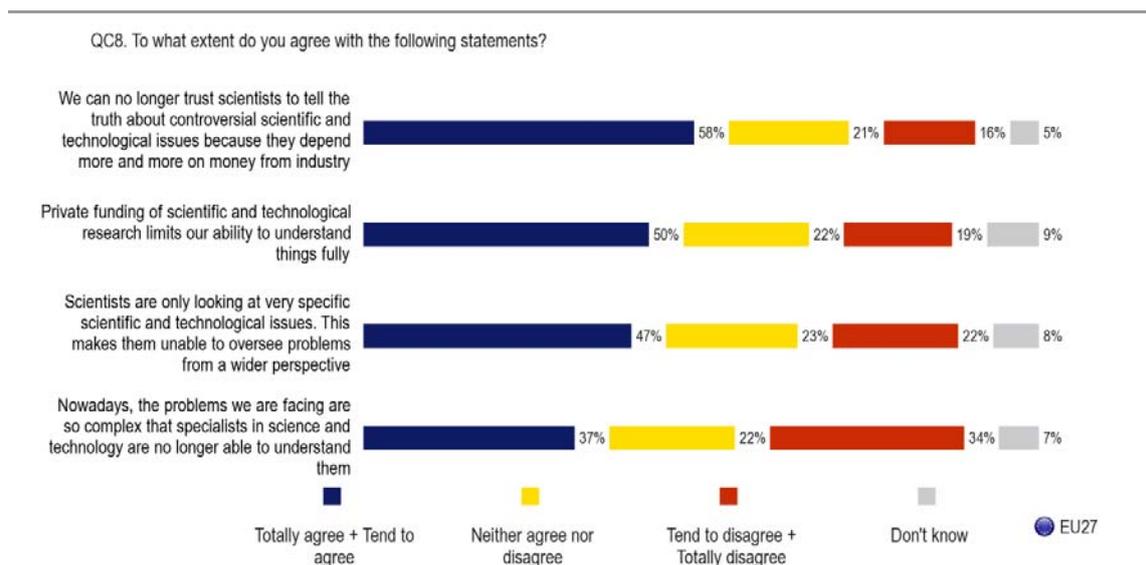
When comparing the findings with those of 2005 we see Europeans have not markedly changed their behaviour on these issues between 2005 and 2010.

QC3. And now, there will be a few questions on how you engage with science and technology. Do you...?



2. IMAGE OF SCIENCE AND TECHNOLOGY

In this chapter we look at the image that Europeans have of science and technology. We will study how Europeans think about the complexity in science and we study how they perceive the role of the scientists themselves. Finally, we investigate whether Europeans feel that private funding, for example from industry, has an effect on the integrity of science and scientists. We begin by examining how these aspects compare.



Europeans feel most strongly that scientists cannot be trusted to tell the truth about controversial scientific and technological issues because they depend more and more on money from industry. More than half (58%) agree that this is the situation and only 16% disagree.

The view that private funding of scientific and technological research limits our ability to understand things fully is supported by one in two respondents and only 19% disagree that this is the situation.

When we look at whether Europeans believe that scientists are only looking at very specific scientific and technological issues and this makes them unable to oversee problems from a wider perspective, 47% of respondents agree and 22% disagree that this is the case. Europeans, however, are not convinced that nowadays the problems we are facing are so complex that specialists in science and technology are no longer able to understand them; 37% of respondents agree with this while 34% disagree that this is so.

2.1 Scientific complexity

- Close to one European in two feels scientists have "tunnel vision" –

When we look at how Europeans see the behaviour of scientists and their perspective on wider issues¹³ nearly half (47%) voice the opinion that scientists are only looking at very specific scientific and technological issues, which makes them unable to oversee problems from a wider perspective. However, 22% of Europeans disagree.

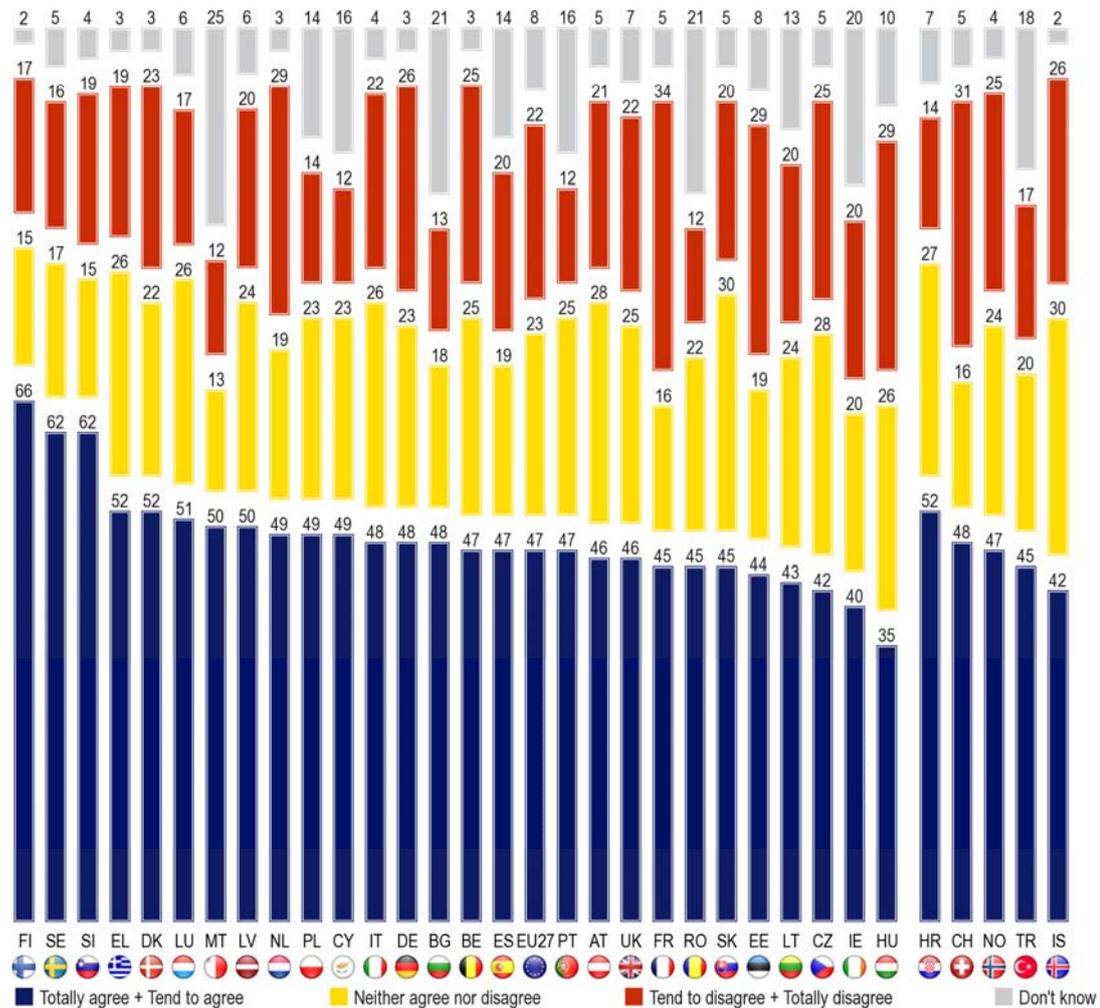
The next figure shows that there are large variations between countries on this issue. In some Member States, the view that scientists don't oversee problems from a wider perspective is particularly widespread (Finland: 66%, Slovenia and Sweden: 62% each). Conversely, just over a third of Hungarians shares this view (35%), which is notably lower than the EU27 average.

There are also variations between countries for those that disagree that scientists are only looking at very specific scientific and technological issues, ranging from 12% in Malta, Cyprus, Portugal and Romania to 34% in France. France, in fact, is the most polarised country: against the 34% who disagree, 45% of respondents tend to or totally agree.

¹³ QC8.1 Scientists are only looking at very specific scientific and technological issues. This makes them unable to oversee problems from a wider perspective. Responses: Totally agree; Tend to agree; Neither agree or disagree; Tend to disagree; Totally disagree; Don't know.

QC8.1. To what extent do you agree with the following statements?

Scientists are only looking at very specific scientific and technological issues. This makes them unable to oversee problems from a wider perspective



When we look at the socio-demographic data, we see little variation in the responses for most groups. However, when we look specifically at those that are very interested in science we see a more pronounced view. These Europeans are twice as likely as those who are not interested in science (29% vs. 15%, respectively) to disagree with the statement that scientists no longer see problems in a wider perspective. The same pattern is found for Europeans who feel very well informed about science: 31% of respondents disagree with the statement, compared to 18% of those who do not feel informed about science. In general, the data shows that Europeans who are interested or who feel well informed are far more likely to have a view about scientists, be it positive or negative.

2.2 Have scientists a good view of the role of their work?

- Europeans do not have a clear opinion on the how scientists deal with the complexity of today's world –

As noted earlier, only 37% of Europeans agree with the statement that nowadays the problems we are facing are so complex that specialists in science and technology are no longer able to understand them while 34% disagree, and 22% neither agree nor disagree¹⁴. This suggests that perhaps Europeans do not have a clear picture of the work of the scientist.

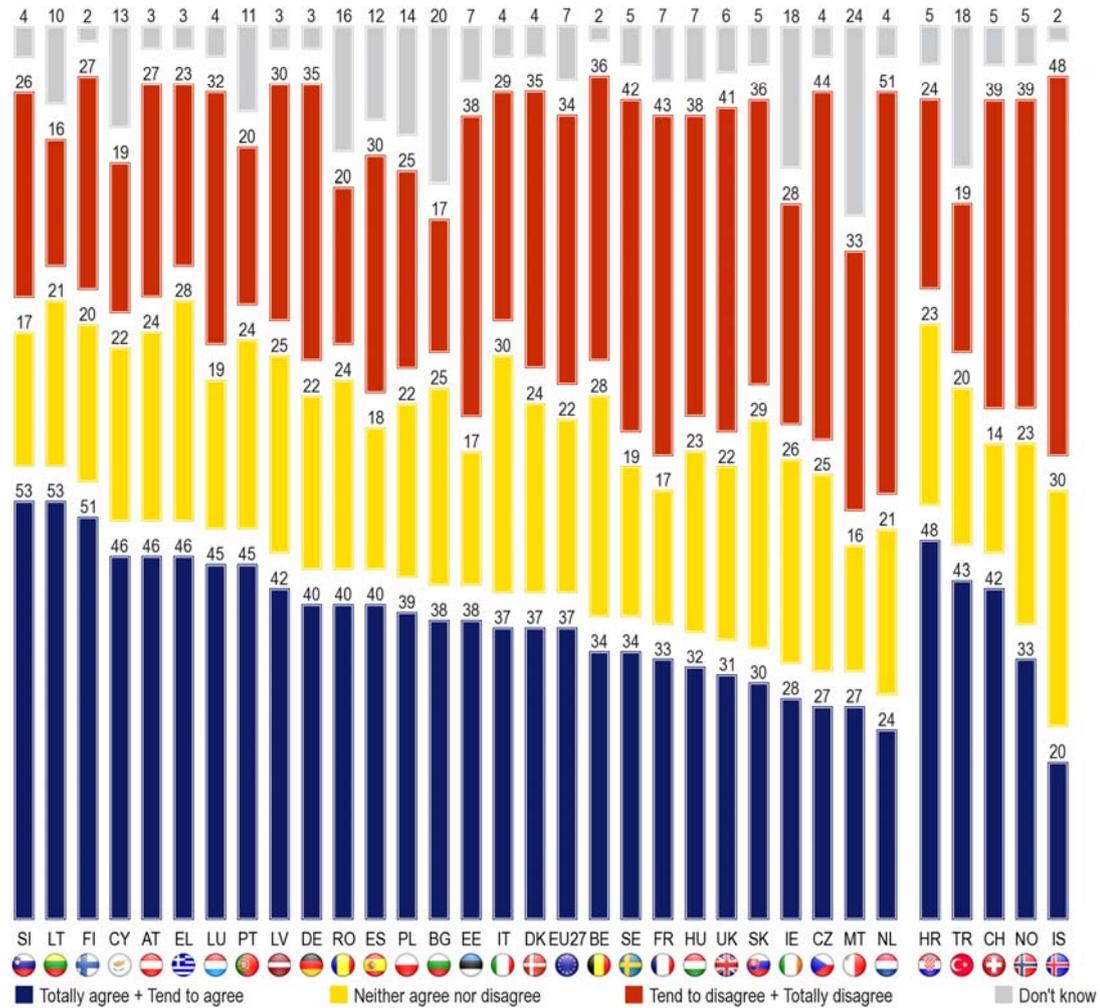
The figure below shows the country scores tends to be around the EU27 average of 37% of respondents that agree for most countries. However, there are three countries where more than half of respondents agree that specialists may not be able to understand the complexity of the subject: Lithuania, Slovenia (53% each) and Finland (51%).

At the lower end of the scale, only 20% of respondents in Iceland and 24% of respondents in the Netherlands agree. The Netherlands is the only country where more than half (51%) disagree that scientists cannot understand the complexity of science and technology.

¹⁴ QC8.2 Nowadays, the problems we are facing are so complex that specialists in science and technology are no longer able to understand them.

QC8.2. To what extent do you agree with the following statements?

Nowadays, the problems we are facing are so complex that specialists in science and technology are no longer able to understand them



Looking at the socio-demographic data, we see again that most groupings are around the EU27 average of 37%. However, when we look at the level of interest in and level of feeling informed about science we see more marked differences. For those respondents who are very interested in science, 45% of respondents disagree whereas for those who are not at all interested in science 21% of respondents disagree. The same pattern is seen when we look at those respondents who feel very informed about science; here 44% of respondents disagree while only 26% of those who feel not at all informed about science disagree. This again suggests that Europeans who are interested and feel informed about science may have fewer reservations about the ability of scientists to understand the complexity of the scientific and technological world.

2.3 Science and the influence of private funding

- Europeans tend not to trust scientists who depend on money from industry. –

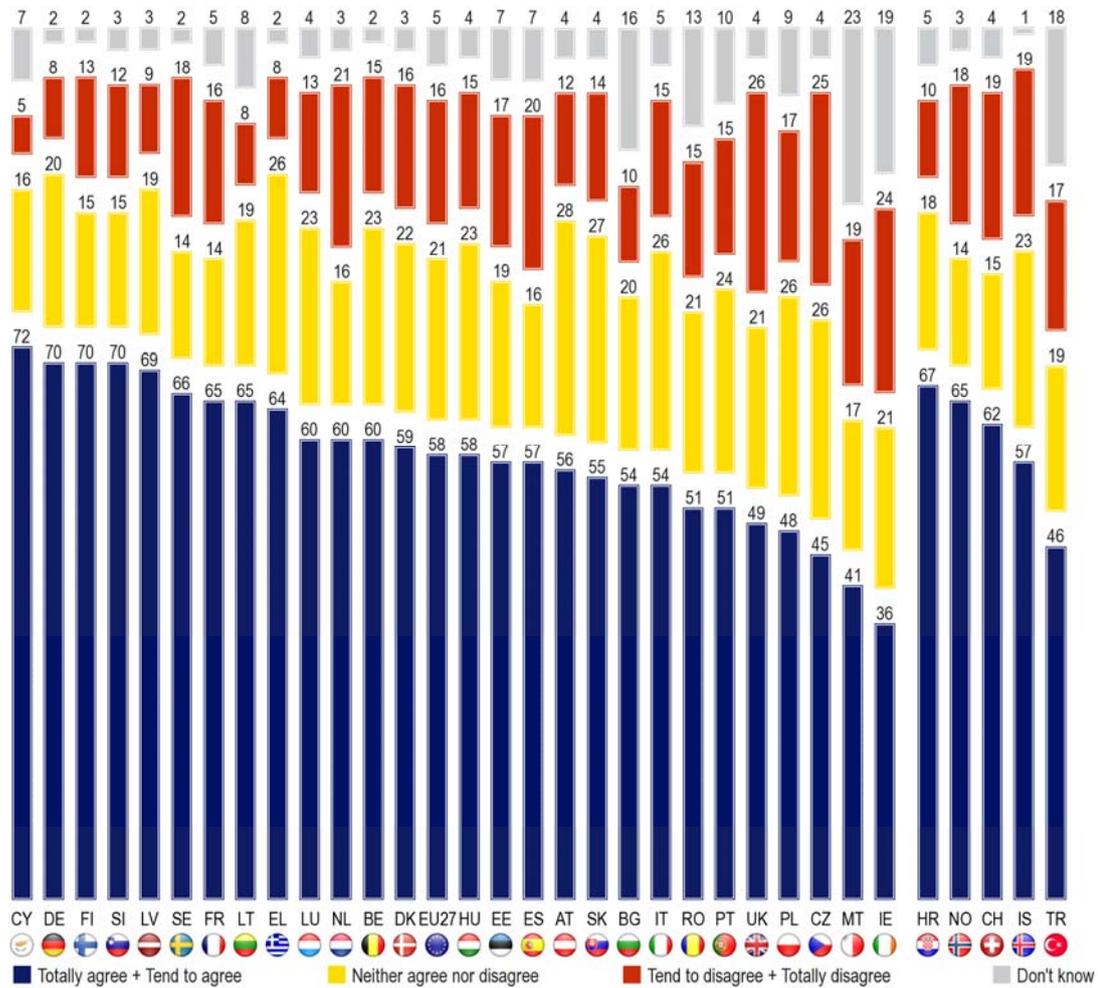
When looking at the influence of private funding, we see that Europeans tend to agree that scientists can be unduly influenced if their work is funded by industry¹⁵. Close to three in five Europeans (58%) agree that "we can no longer trust scientists to tell the truth about controversial scientific and technological issues because they depend more and more on money from industry" while only 16% of respondents at the EU27 level disagree.

The figure below shows that there are countries where respondents express a stronger view, with Cyprus in the lead at 72%. In Finland, Germany and Slovenia, seven out of ten respondents agree with the statement, also considerably higher than the EU27 average of 58%. Very few countries have less than 50% of respondents who agree that they cannot trust scientists who depend on money from industry. Ireland has the lowest rate of agreement at 36% and five other countries have fewer than 50% of respondents in agreement: Malta (41%), the Czech Republic (45%), Turkey (46%), Poland (48%) and the United Kingdom (49%). The same countries are also amongst those whose respondents disagree the most, led by the United Kingdom (26% disagreeing), the Czech Republic (25%) and Ireland (24%).

¹⁵ QC8.3 We can no longer trust scientists to tell the truth about controversial scientific and technological issues because they depend more and more on money from industry.

QC8.3. To what extent do you agree with the following statements?

We can no longer trust scientists to tell the truth about controversial scientific and technological issues because they depend more and more on money from industry



When we look at the socio-demographics we see that most groups are around the EU27 average. Again, we see that there is a more polarised view for those respondents who are very interested in science. Six out of ten (61%) agree while the corresponding figure for Europeans who are not at all interested in science is 53%. In addition, 20% of those who are very interested in science disagree while for those who are not at all interested only 13% disagree. This shows that those who are more interested in science will have a stronger view that scientists are influenced by their benefactors, be it positive or negative.

- Private funding of scientific and technological research limits the ability to understand things fully. –

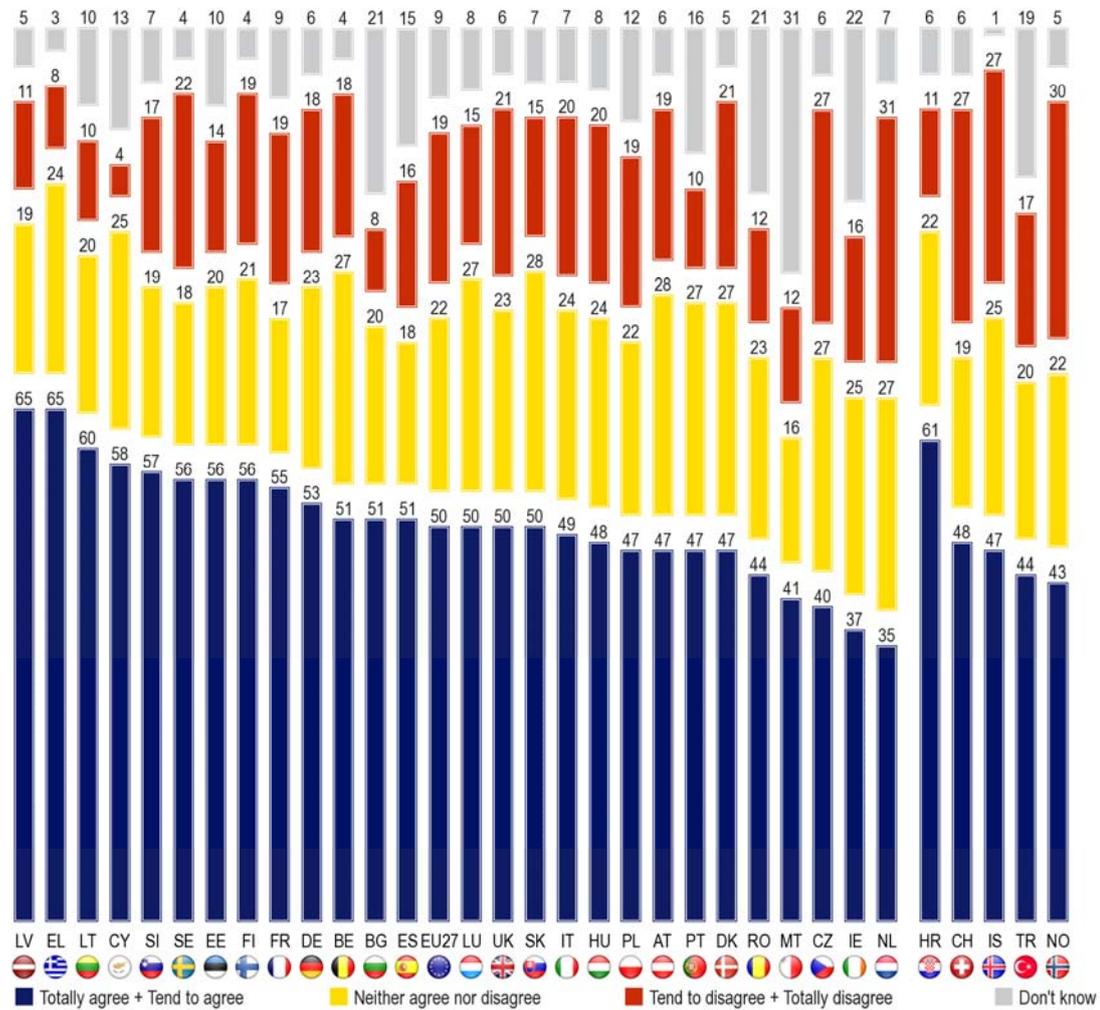
When we further investigate the influence of private funding on scientific research¹⁶, we find that one European in two agrees that such funding limits our understanding, while only 19% at the EU27 level disagree that this is the case.

The figure below shows that respondents in some countries show more suspicion and have a stronger view. This group of countries is led by Greece and Latvia (65% each) and followed by Croatia (61%) and Lithuania (60%). Respondents in the Netherlands and Norway have the most faith that private sources of funding would not unduly influence our understanding. In the Netherlands 31% of respondents disagree with the statement, which is near to the total of 35% of Dutch respondents who agree with the statement. In Norway 30% of respondents disagree, although there are significantly more Norwegian respondents (43%) who agree that scientific and technological research may be limited by the consequences of private funding.

¹⁶ QC8.4 Private funding of scientific and technological research limits our ability to understand things fully.

QC8.4. To what extent do you agree with the following statements?

Private funding of scientific and technological research limits our ability to understand things fully



When we look at the socio-demographic data, we again see that most groups are around the EU27 average of 50% who agree and 19% who disagree. The pattern is also similar. When we look at those respondents who are very interested in science we see that a higher percentage agrees compared to those who are not interested (55% vs. 43%). Furthermore, those very interested in science are more likely to disagree (23%, compared to only 14% of respondents who are not interested in science). There is evidence again that those who are more interested in science are more likely to have a view, good or bad, on whether private funding of scientific and technological research limits our ability to understand things fully than those respondents who are not interested in science.

3. ATTITUDES TOWARDS SCIENCE AND TECHNOLOGY

The survey measures the attitudes of Europeans towards science and technology through a battery of statements about science, technology or the environment to which respondents were asked if they agreed or disagreed¹⁷. We studied optimism and scepticism, the perceived effect of science and technology on society and the impact on the economy.

In this chapter we first study the optimism amongst European citizens about science and technology in general. We then look at individual benefits of science and technology: is it making our lives healthier; will it protect the world's natural resources; can it solve all problems?

We then look to find what sort of reservations Europeans have about science and technology: are scientists too powerful and becoming dangerous; is it at all important to know about science; and is science making our lives change too fast?

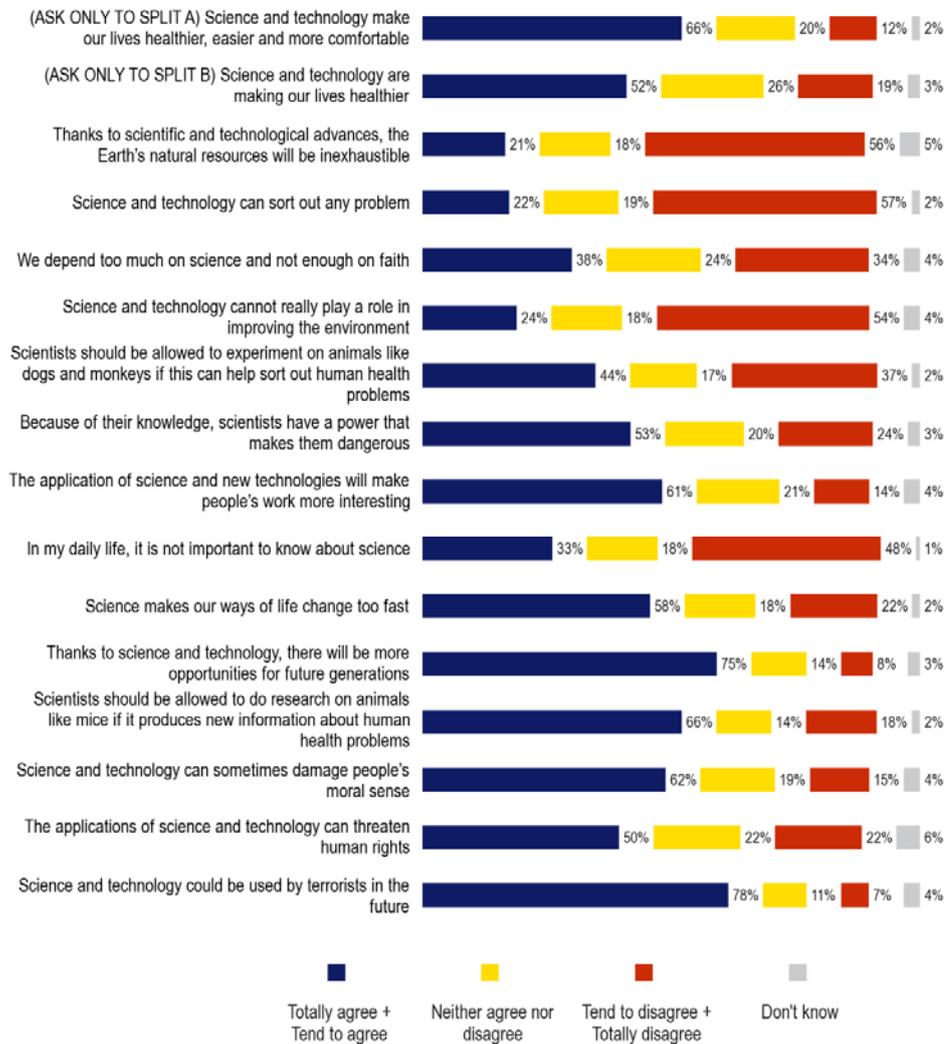
Further, we look to see whether there is any relationship between faith and views on science. We then look if Europeans feel that there are implications of science and technology on human rights, on the economy, and we ask if there is a belief that science will make people's work more interesting and provide more opportunities for future generations.

Finally we look at the views of Europeans on the wider effect of science and technology on society, their views on animal testing, the potential terrorist threat if any, the environment, the health of the population and whether the potential returns of science and technology have a relationship with or are in proportion to the potential risks.

Overall, the survey shows that European citizens are now fairly optimistic about science and technology but there is a slight shift towards scepticism compared to the 2005 survey. Although it may bring benefits, Europeans do not have too high hopes that science and technology can solve all the worlds' problems. Furthermore, the survey shows that the public has become on the whole less sensitive to issues about science and technology, less enthusiastic about the potential benefits and less concerned about the potential drawbacks.

¹⁷ Responses: Totally agree; Tend to agree; Neither agree or disagree; Tend to disagree; Totally disagree; Don't know.

QC6. I would like to read out some statements that people have made about science, technology or the environment. For each statement, please tell me how much you agree or disagree.



The figure above shows the average responses for the 27 EU Member States to the series of questions concerning attitudes towards science and technology. They show that EU citizens feel strongly that science could be used by terrorists in the future, with 78% in agreement and only 7% in disagreement.

However, the citizens of the European Union are positive about science providing more opportunities, with 75% in agreement with this. They also in majority feel positively that science is making our lives healthier easier and more comfortable (66%). It should be noted that only half of the respondents were presented with this statement whereas the other half was only asked whether science and technology is making our lives healthier. It is interesting that this statement obtains a lower level of agreement (52%) which indicates that there is more doubt about the effect of science on health alone but when considered in the context of making life easier and more comfortable, people are much more positive about the effect of science. Finally, a large majority of respondents (61%) agree that the application of science and new technologies will make people's work more interesting.

At the same time, the results in the figure above indicate some reservations about science. Two out of three (66%) Europeans feel that experimentation using mice is acceptable if this leads to improvement in health and well being. However, when asked if scientists should be allowed to experiment on animals like dogs and monkeys if this can help sort out human health problems, only 44% of respondents at EU27 level agree while 37% disagree.

There is also a tendency to feel that science can sometimes damage people's moral sense, where 62% of Europeans agree. Close to six out of ten Europeans (58%) feel that science makes our daily life change too fast and 53% feel that scientists can be too powerful and potentially dangerous.

On whether science will provide all the answers, Europeans on the whole have some belief that science will help but cannot solve every problem. A slim majority of 54% believe that science can sort all environmental problems, but very few - 22% at the EU27 level - agree that science can solve any problem and only 21% believe that science will lead to the world's natural resources being inexhaustible.

Next we will look at each statement in detail to see whether there are any significant differences of opinion among countries surveyed. Where possible we will show any change in the responses compared to the most recent previous survey results¹⁸.

¹⁸ Special Eurobarometer 224 "Europeans, Science & Technology" (2005).

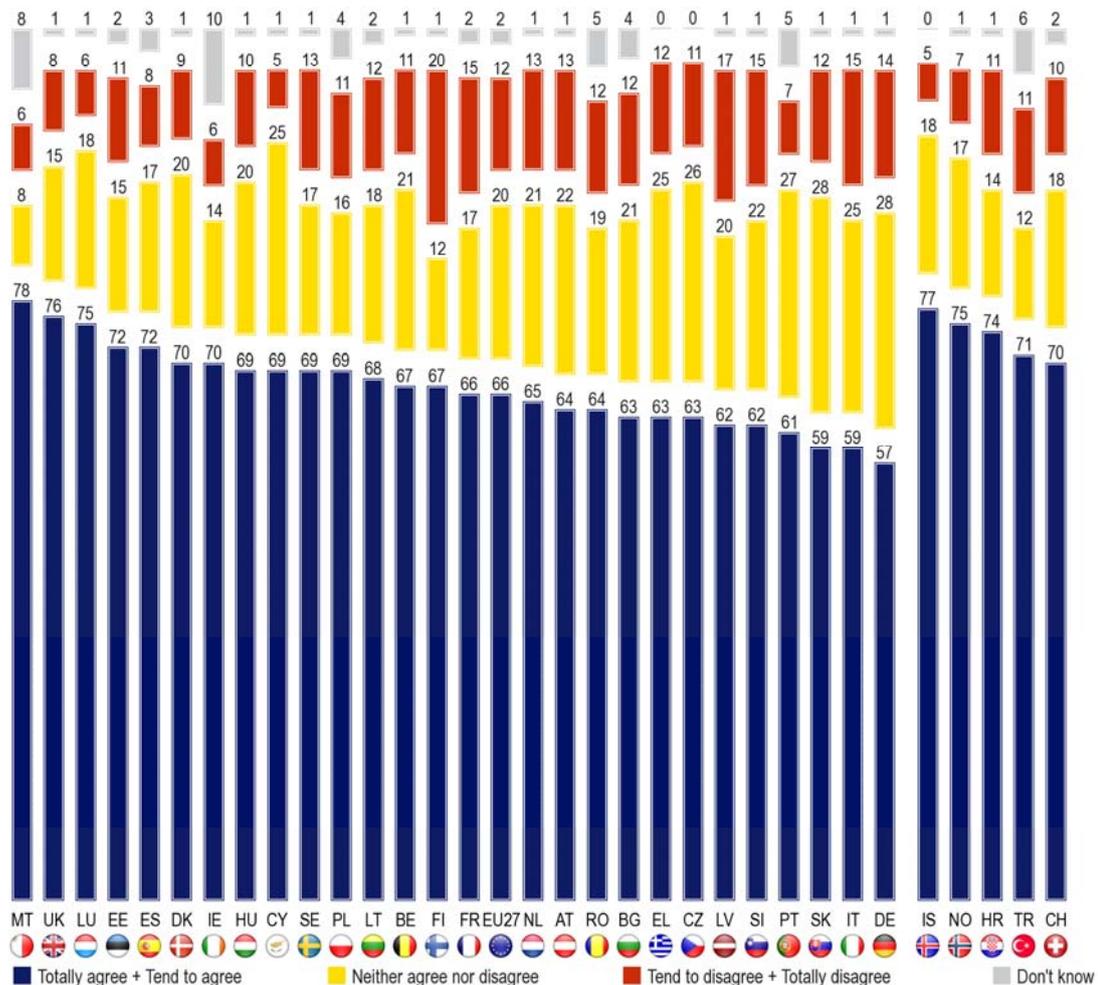
3.1 Optimism regarding science and technology

- Science and technology make our lives healthier, easier and more comfortable. -

As noted earlier, when asked whether science and technology make our lives healthier, easier and more comfortable, 66% of Europeans on average agree¹⁹. The figure below shows that there is widespread agreement on this statement among the individual European countries.

QC6.1. I would like to read out some statements that people have made about science, technology or the environment. For each statement, please tell me how much you agree or disagree.

(ASK ONLY TO SPLIT A) Science and technology make our lives healthier, easier and more comfortable



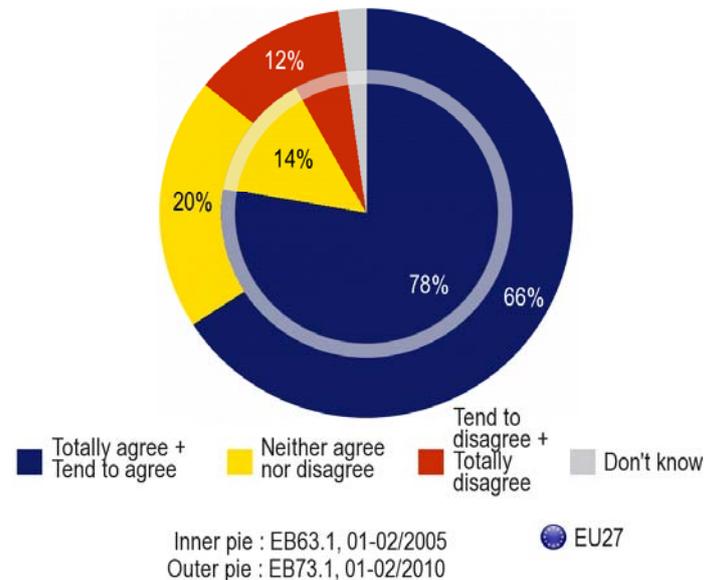
¹⁹ QC6.1 Asked to Split A of the sample: Science and technology make our lives healthier, easier and more comfortable.

In five countries, three quarters or more of respondents agree with the statement: Malta at 78%, Iceland at 77%, the United Kingdom at 76% and Luxembourg and Norway at 75%. Finland has 20% of respondents who disagree that science is making our lives healthier, easier and more comfortable, and this is well above the EU27 average of 12% of respondents.

When looking at the previous study undertaken in 2005, we see a shift away from total agreement: 32% of respondents totally agreed in 2005 while only 19% of respondents at the EU27 average totally agree in 2010. The overall EU27 average of 66% of respondents in agreement in 2010 is down compared to the 78% of respondents in 2005 for the EU25 average.

QC6.1. I would like to read out some statements that people have made about science, technology or the environment. For each statement, please tell me how much you agree or disagree.

(ASK ONLY TO SPLIT A) Science and technology make our lives healthier, easier and more comfortable



This negative shift since 2005 is noted in all countries except Croatia, Norway, Luxembourg and Spain (where the level of agreement did not change significantly). The most striking shift has been recorded in Germany, where the proportion of respondents agreeing has dropped from 86% in 2005 to 57% in 2010.

QC6.1 I would like to read out some statements that people have made about science, technology or the environment. For each statement, please tell me how much you agree or disagree.

(ASK ONLY TO SPLIT A) Science and technology make our lives healthier, easier and more comfortable

	% Totally agree + Tend to agree	EB73.1, 01-02/2010	EB63.1, 01-02/2005	Diff. EB73.1-EB63.1
 EU27	66%	66%	78%	-12
 LU	75%	75%	73%	+2
 ES	72%	72%	73%	-1
 DK	70%	70%	73%	-3
 UK	76%	76%	79%	-3
 EL	63%	63%	67%	-4
 SI	62%	62%	66%	-4
 NL	65%	65%	70%	-5
 BG	63%	63%	68%	-5
 CZ	63%	63%	69%	-6
 FR	66%	66%	73%	-7
 IE	70%	70%	77%	-7
 AT	64%	64%	71%	-7
 LV	62%	62%	71%	-9
 MT	78%	78%	87%	-9
 BE	67%	67%	77%	-10
 FI	67%	67%	77%	-10
 HU	69%	69%	79%	-10
 SE	69%	69%	81%	-12
 CY	69%	69%	81%	-12
 EE	72%	72%	86%	-14
 PL	69%	69%	83%	-14
 RO	64%	64%	78%	-14
 LT	68%	68%	83%	-15
 SK	59%	59%	74%	-15
 PT	61%	61%	77%	-16
 IT	59%	59%	76%	-17
 DE	57%	57%	86%	-29
 HR	74%	74%	71%	+3
 TR	71%	71%	74%	-3
 IS	77%	77%	81%	-4
 NO	75%	75%	73%	+2
 CH	70%	70%	82%	-12

When looking at the socio-demographic data, there appears to be little variation around the EU27 average. We see that 76% of Europeans who are very interested in science agree while only 52% of those who are not at all interested in science share this opinion.

The same pattern is seen for those respondents who feel very well informed about science where 77% agree while for those who feel not at all informed only 59% agree that science is making our lives healthier, easier and more comfortable.

- When focus is narrowed specifically to health, public opinion is not as positive –

When examining the effect of science and technology with a specific focus on health only, we have seen that levels of optimism are lower than when the context includes ease and comfort²⁰: just over half of EU citizens (52%) agree that science is making our lives healthier, around a quarter (26%) neither agrees nor disagrees and one fifth (19%) disagrees.

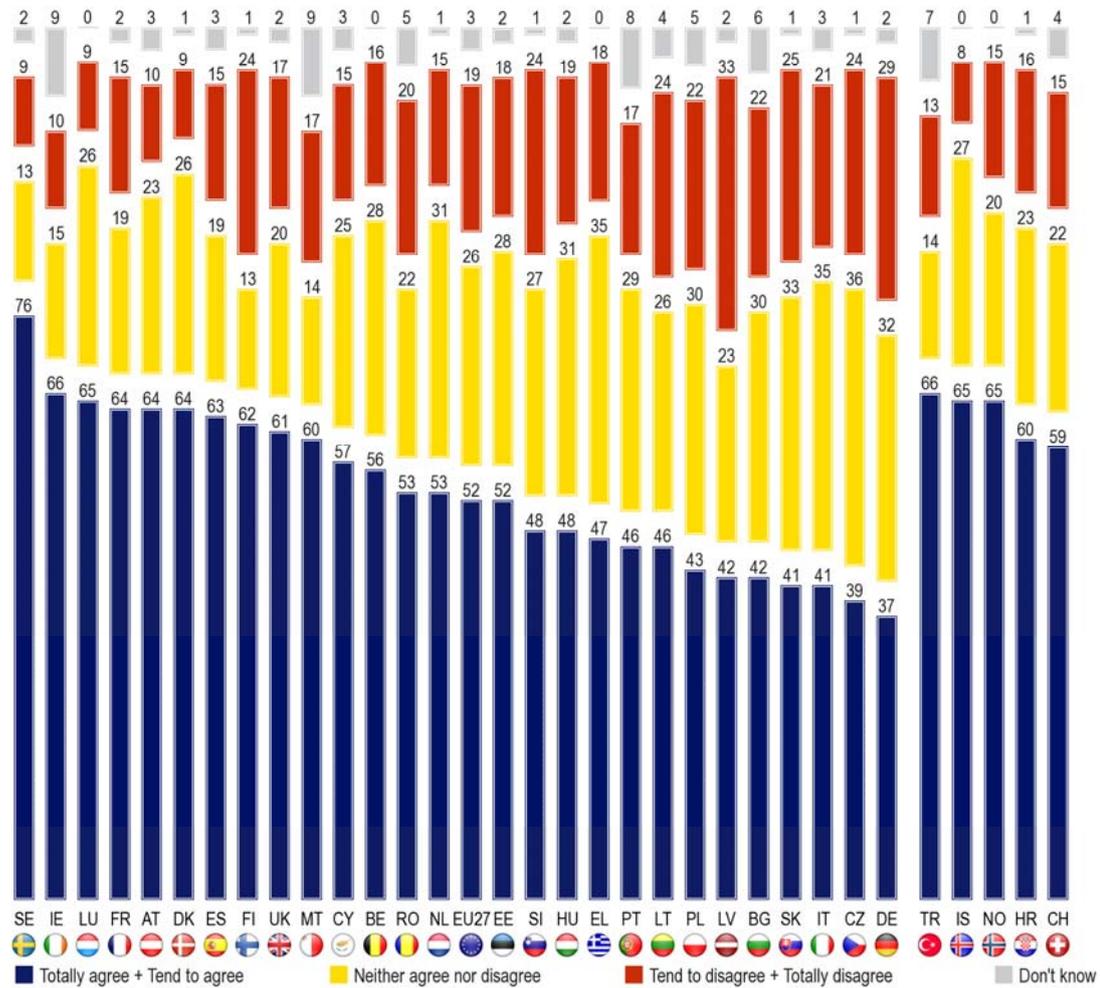
The figure below shows the differences between countries where Sweden tops the rankings with 76% of respondents in agreement and with only 9% of respondents who disagree. Turkey and Ireland with 66% of respondents are the only other countries where two thirds or more of respondents agree. At the other end of the scale, Germany is the lowest at 37% of respondents in agreement.

Looking at levels of disagreement shows that only Latvia has a third or more of respondents who disagree (33%) which is well above the EU27 average of 19% of respondents. Iceland has the lowest number of respondents who disagree (8%), followed by Denmark, Luxembourg and Sweden at 9%.

²⁰ QC6.2 Asked to Split B of the sample: Science and technology are making our lives healthier.

QC6.2. I would like to read out some statements that people have made about science, technology or the environment. For each statement, please tell me how much you agree or disagree.

(ASK ONLY TO SPLIT B) Science and technology are making our lives healthier



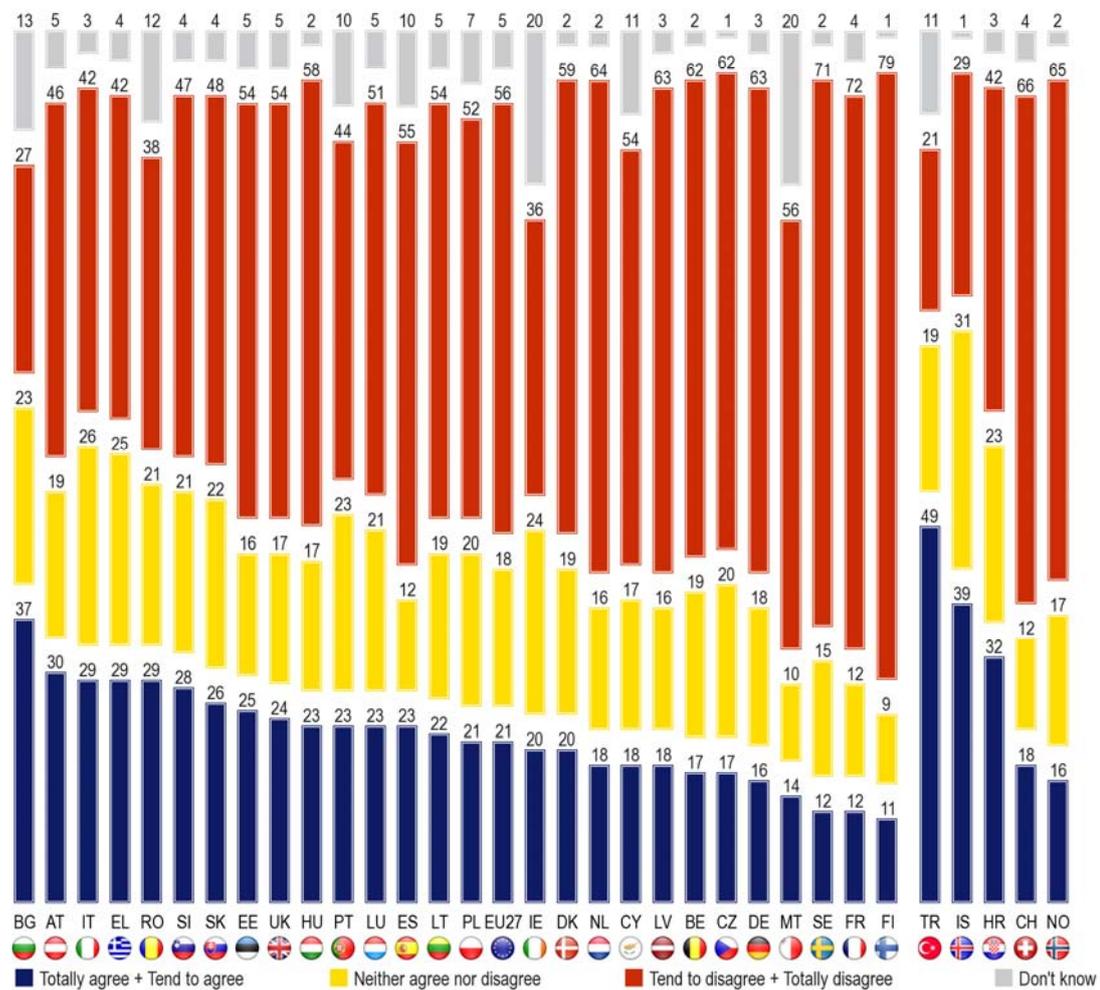
When looking at socio-demographics, we see that men are slightly more likely than women to agree that science and technology have a positive effect on health (55% vs. 47%). Again, Europeans who are very interested and informed in scientific issues are much more likely to agree (61% and 67%, respectively) that science is making our lives healthier compared to 39% and 44%, respectively who are not interested or informed about science.

- *Scientific and technological advances will not prevent the exhausting of the Earth's natural resources.* –

Most European citizens do not agree that science and technology will allow the Earth's natural resources to be inexhaustible²¹. At EU27 level, only 21% of respondents on average agree with the statement.

QC6.3. I would like to read out some statements that people have made about science, technology or the environment. For each statement, please tell me how much you agree or disagree.

Thanks to scientific and technological advances, the Earth's natural resources will be inexhaustible



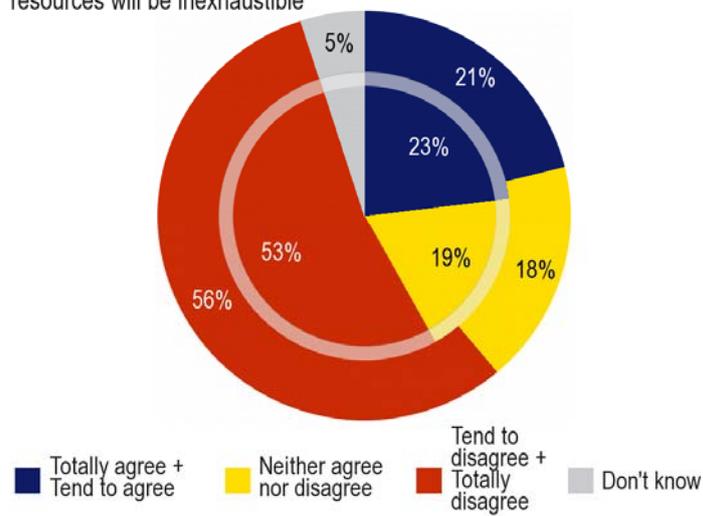
²¹ QC6.3 Thanks to scientific and technological advances, the Earth's natural resources will be inexhaustible.

The highest rates of disagreement are found in Finland with 79% of respondents, France with 72% of respondents, Sweden with 71% of respondents. The figure above also shows that when we look at individual countries we find that respondents in Turkey show the highest majority of 49% of respondents agreeing with this statement, Iceland with 39% of respondents also has a higher rate of agreement than the EU27 average. The overall view of European citizens is that the earth's natural resources are exhaustible and that scientific and technological advances alone cannot prevent this from occurring.

If we compare the current result with 2005 we see that scepticism by European citizens towards this idea has increased to 56% of respondents who disagree from 53% of respondents who disagreed in 2005. There is not, however, a consistent pattern between countries.

QC6.3. I would like to read out some statements that people have made about science, technology or the environment. For each statement, please tell me how much you agree or disagree.

Thanks to scientific and technological advances, the Earth's natural resources will be inexhaustible



Inner pie : EB63.1, 01-02/2005
 Outer pie : EB73.1, 01-02/2010

The most extreme developments are noted on the one hand in Spain where the level of disagreement increased from 34% in 2005 to 55% and on the other hand in Luxembourg where the level of disagreement fell from 70% in 2005 to 51% in 2010.

QC6.3 I would like to read out some statements that people have made about science, technology or the environment. For each statement, please tell me how much you agree or disagree.

Thanks to scientific and technological advances, the Earth's natural resources will be inexhaustible

	Tend to disagree + Totally disagree	EB73.1, 01-02/2010	EB63.1, 01-02/2005	Diff. EB73.1- EB63.1
 EU27		56%	53%	+3
 ES		55%	34%	+21
 PT		44%	33%	+11
 CY		54%	43%	+11
 DE		63%	54%	+9
 LV		63%	54%	+9
 HU		58%	50%	+8
 IT		42%	35%	+7
 FI		79%	72%	+7
 LT		54%	47%	+7
 RO		38%	35%	+3
 EE		54%	53%	+1
 MT		56%	55%	+1
 BG		27%	26%	+1
 SE		71%	73%	-2
 SK		48%	50%	-2
 FR		72%	75%	-3
 UK		54%	58%	-4
 DK		59%	64%	-5
 EL		42%	47%	-5
 AT		46%	51%	-5
 NL		64%	70%	-6
 PL		52%	58%	-6
 SI		47%	54%	-7
 BE		62%	70%	-8
 CZ		62%	72%	-10
 IE		36%	50%	-14
 LU		51%	70%	-19
 HR		42%	50%	-8
 TR		21%	21%	=
 IS		29%	31%	-2
 NO		65%	70%	-5
 CH		66%	61%	+5

Finally, the socio-demographic analysis shows that managers are most likely to disagree (65%), even more so than Europeans who see themselves as very interested and very well informed about scientific discoveries (60% each).

- Science and technology cannot sort out any problem –

Looking at the overall view of science we see that few Europeans put hope into science and technology for sorting out any kind of problem²². Only 22% at the EU27 average indicate that they agree that science and technology can sort out any problem while a clear majority of 57% shows disagreement to this statement.

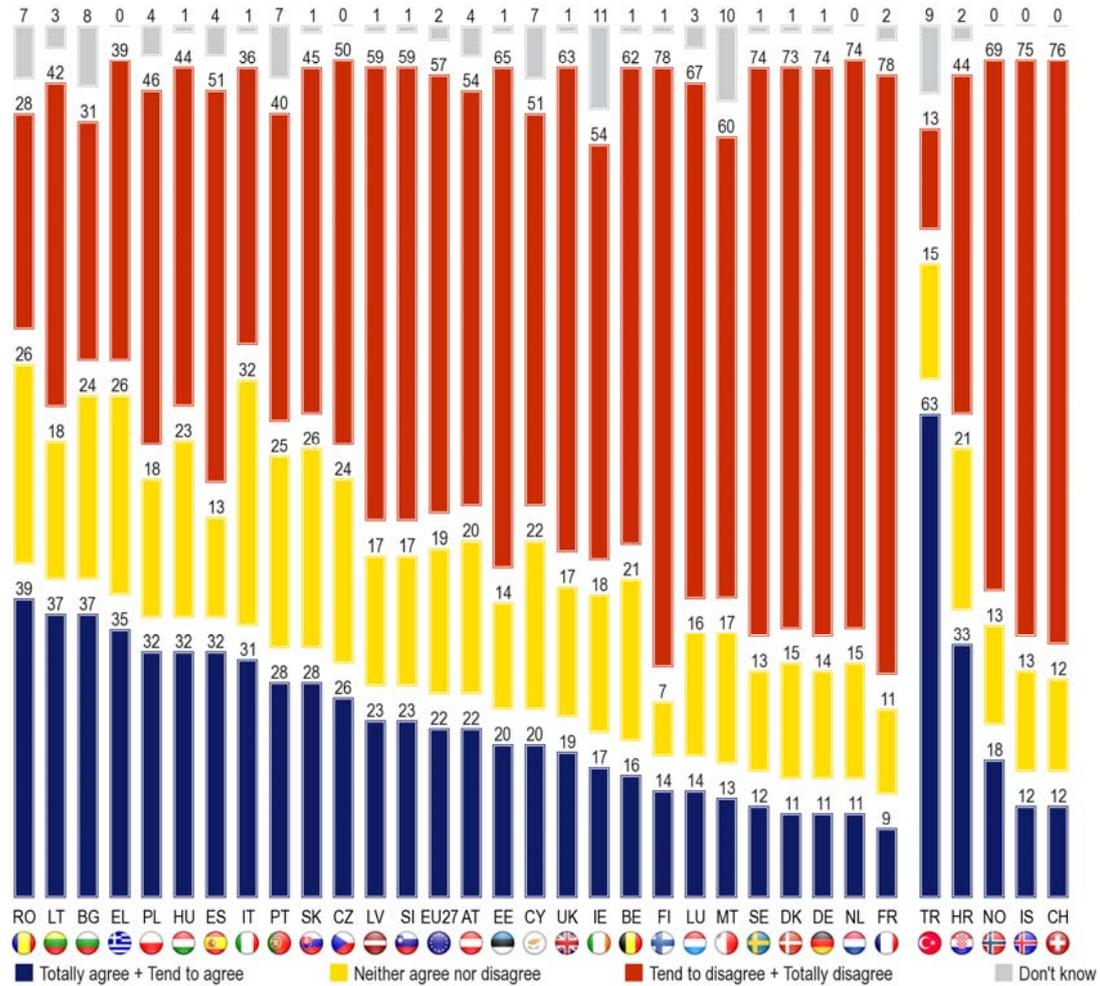
When we look at individual countries, the figure below shows that in four countries three quarters or more of respondents disagree with this statement. Respondents in Finland and France are the most sceptical towards this idea, with 78% of respondents in both countries disagreeing, the two other countries being Switzerland (76%) and Iceland (75%).

Turkey has an exceptionally high percentage of respondents who agree that science and technology can sort out any problem (63%) and in fact represents the only country where an outright majority holds this view. Other countries where one third or more of respondents agree are Romania at 39%, Lithuania and Bulgaria at 37% each, Greece (35%) and Croatia at 33%.

²² QC6.4 Science and technology can sort out any problem.

QC6.4. I would like to read out some statements that people have made about science, technology or the environment. For each statement, please tell me how much you agree or disagree.

Science and technology can sort out any problem



Comparing the findings of this survey with those of 2005, we see no significant difference between the current proportion of Europeans who indicate that they agree (22%) and the level in 2005 (21%). A similar majority still shows disagreement to this statement (57% in 2010 vs. 58% in 2005).

At the country level there are some notable shifts. Romania, for instance, showed a very high rate of 51% of respondents in 2005 who agreed but this is now much lower at 39%.

Looking at the socio-demographics, most of the groupings are around the EU27 average of 57% of respondents who disagree. However, managers are more likely to disagree with 67% of respondents in that group in disagreement, political preferences appear to have an influence where 62% of respondents who consider themselves left of centre disagree while 54% of those who consider themselves as right of centre disagree. The pattern for those who consider themselves interested in scientific development is similar to the previous questions but not as marked, where 60% of respondents who are very interested disagree and 52% of respondents who are not interested do not agree.

3.2 Reserved views concerning science and technology

- Because of their knowledge, scientists have a power that makes them dangerous –

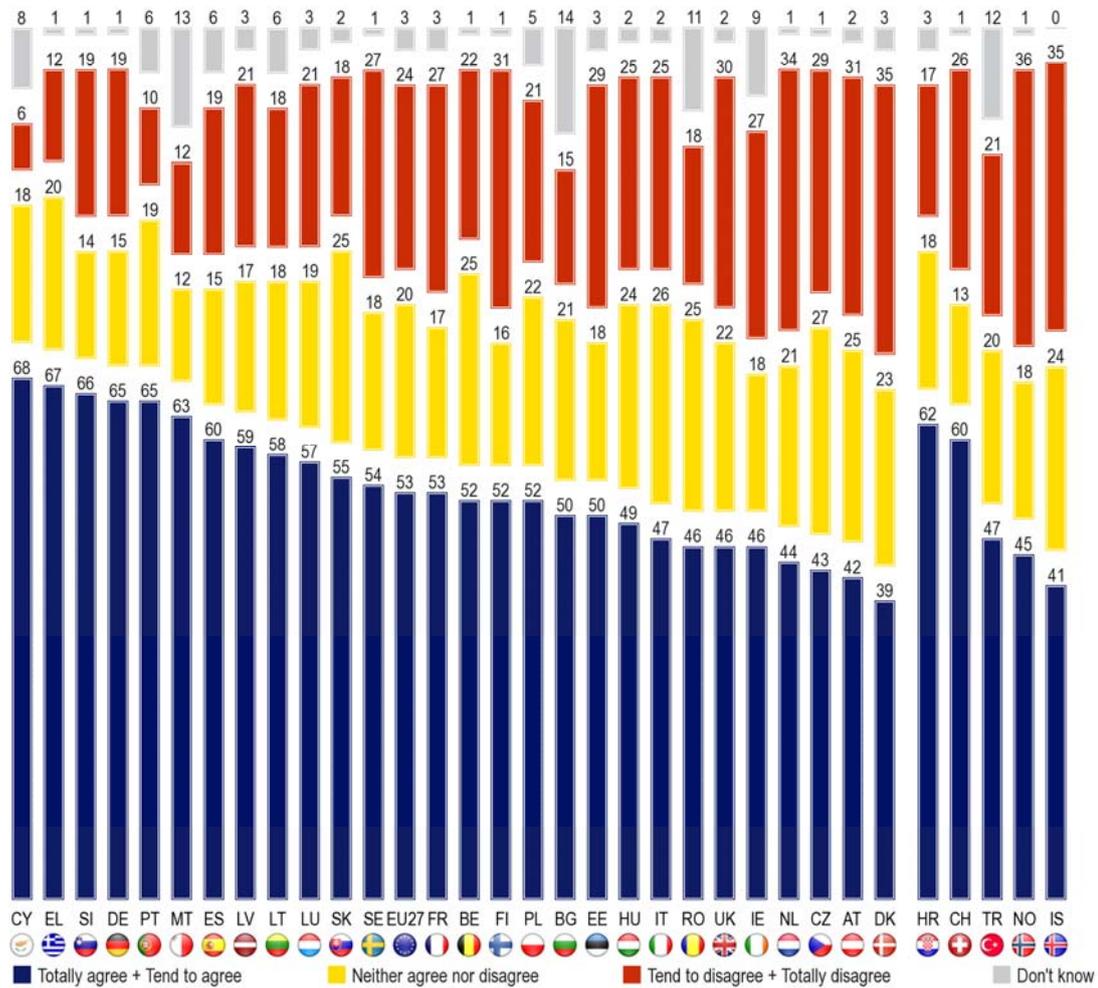
The image of scientists in Europe can also take more pessimistic forms. A majority of European citizens, 53% of respondents at the EU27 level, indicate that scientists, because of their knowledge, have a power that makes them dangerous²³. Around a quarter of EU citizens (24%) disagree with this.

The figure below shows that in many mainly Southern European countries respondents in majority agree. The highest levels are noted in Cyprus (68%), Greece (67%) respondents, Slovenia (66%), Portugal, Germany (65% each), Malta (63%) and Croatia (62%). Conversely, in some Nordic countries we find that over a third disagrees that scientists have a power that makes them dangerous: 36% of respondents in Norway, 35% of respondents in Denmark and Iceland and 34% of respondents in the Netherlands.

²³ QC6.8 Because of their knowledge, scientists have a power that makes them dangerous.

QC6.8. I would like to read out some statements that people have made about science, technology or the environment. For each statement, please tell me how much you agree or disagree.

Because of their knowledge, scientists have a power that makes them dangerous



In the 2005 survey, the result for the same statement gave a slightly higher rate of agreement at the EU25 level (59%). Disagreement levels have slightly increased from 21% of respondents at the EU25 level in 2005 to 24% of respondents at the EU27 level in 2010. Changes at country level differ. Greece for example shows an increase in agreement from 60% of respondents in 2005 to 67% of respondents in 2010. France on the other had shows the opposite where 61% of respondents agreed in 2005 and this has declined to 53% of respondents in 2010.

When we look at the socio-demographic data, for all the groups we see little variation around the EU27 average of 53% of respondents who agree with the statement and 24% who disagree. However, we can see that those respondents who consider themselves very informed about scientific discoveries are much more likely to disagree with this statement (33%) compared to the group who are not at all informed about scientific discoveries where only 20% of respondents disagree that scientists have a power that makes them dangerous.

- It is important to know about science. –

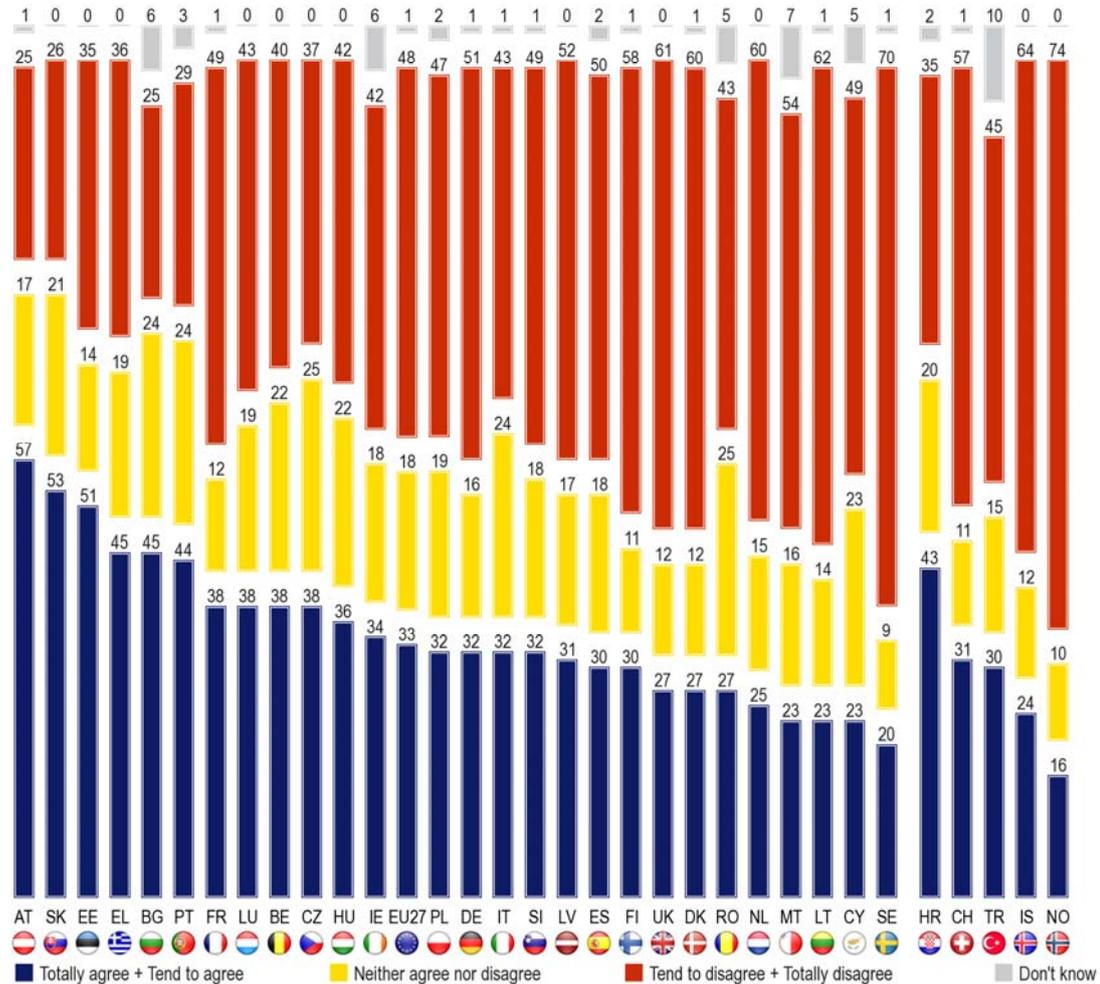
Looking further at how Europeans feel about knowing about science in their daily lives, shows that Europeans on average tend to consider science in their daily life important²⁴. As the statement is worded negatively, the higher the level of disagreement is, the more people believe that knowing about science is important. The survey shows that 33% of respondents agree that it is **not** important to know about science in their daily lives while 48% disagree. The figure below shows that agreement is lowest for Norway, where only 16% of respondents agree and disagreement is highest at 74%.

Conversely, there are three countries where more than half of the respondents agree that it is **not** important to know about science. In Austria 57% of respondents do not find it important to know about science, and in Slovakia and Estonia 53% and 51% of respondents respectively do **not** find it important to know about science in their daily lives. In these countries, knowing about science is considered least important.

²⁴ QC6.10 In my daily life, it is **not** important to know about science.

QC6.10. I would like to read out some statements that people have made about science, technology or the environment. For each statement, please tell me how much you agree or disagree.

In my daily life, it is not important to know about science



Comparing the findings of 2010 with the survey in 2005, we find that Europeans are now more inclined to consider that it is important to know about science (there is a slight shift towards **disagreement** that it is **not** important to know about science). The EU27 average for those who disagree with the statement in 2010 is 48% of respondents while in 2005 45% of respondents at the EU25 level disagreed. The level of agreement with the statement has gone down from 37% in 2005 to 33% in 2010.

Although little change has been recorded in many countries a number show a marked increase in the proportion of respondents that now disagree that it is **not** important to know about science.

Notably, in Norway a shift of 16 percentage points has been recorded in the proportion of respondents disagreeing (from 58% of respondents in 2005 to 74% of respondents in 2010), Sweden and the UK saw an increase of 13 points since 2005.

Looking at the socio-demographic data, those who are more likely to disagree that it is **not** important to know about science are managers (69%), those informed about scientific discoveries at (66%) and students (62%). Furthermore, those that are very interested in science disagree at 66% of respondents while only 26% of respondents who are not at all interested in science disagree that it is **not** important to know about science in their daily lives.

- Science makes our ways of life change too fast. –

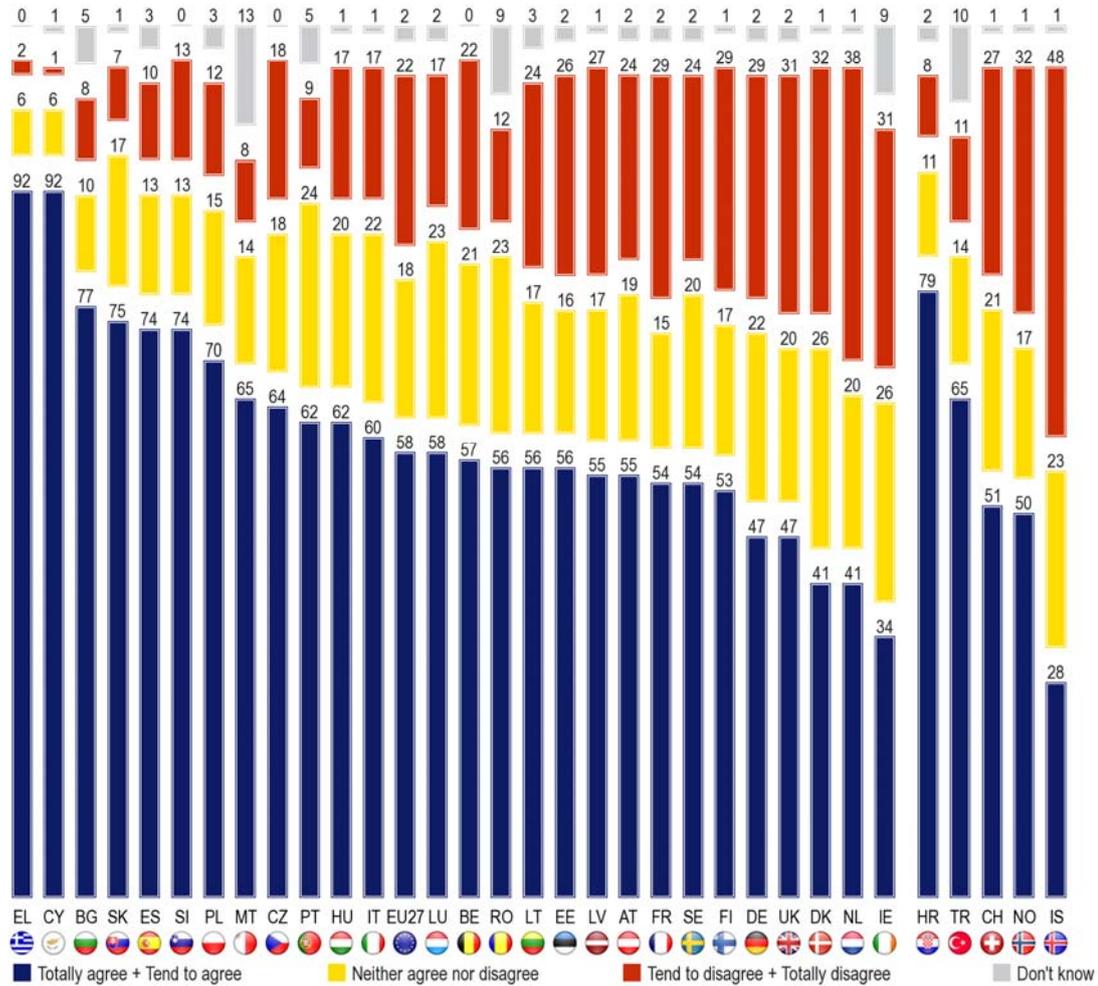
Looking at the pace of change in life, a slight majority of 58% of respondents amongst European citizens agree that science makes our ways of life change too fast²⁵. Greece and Cyprus at 92% of respondents have an extreme view that science is changing life at a fast pace as shown in the figure below. At the other end of the scale, only 28% of respondents in Iceland, 34% of respondents in Ireland and 41% of respondents in both the Netherlands and Denmark agree that science makes our ways of life change too fast.

When we look at those countries who disagree we see that 48% of respondents in Iceland disagree, 38% of respondents in the Netherlands disagree followed by 32% of respondents in Denmark and Norway. Countries showing a very low level of disagreement, less than 10% of respondents, are Cyprus at 1%, Greece at 2%, Slovakia at 7%, Malta, Croatia and Bulgaria at 8% and Portugal with 9% of respondents who disagree that science is making our live change too fast.

²⁵ QC6.11 Science makes our ways of life change too fast.

QC6.11. I would like to read out some statements that people have made about science, technology or the environment. For each statement, please tell me how much you agree or disagree.

Science makes our ways of life change too fast



When we compare the results of this survey with the survey of 2005 we see a similar but on the whole slightly less concerned view. In 2010, 58% of respondents agree that science is making our ways of life change too fast, slightly less than in 2005 where 60% of respondents agreed with the statement. The proportion of respondents who disagree has changed from 20% in 2005 to 22% in 2010.

Country differences are apparent. Many countries show only slight changes in line with the overall EU27 average. However, some countries show a marked change in those that agree: 80% respondents in Malta agreed in 2005 and this is 65% of respondents in 2010, 83% of respondents in Poland agreed in 2005 and this is 70% of respondents in 2010.

Bulgaria shows the reverse where 66% of respondents in 2005 agreed and this has changed to 77% of respondents in 2010 who agree that science makes our ways of life change too fast.

Looking at the socio-demographic groups, on the whole there is relatively little variation around the EU average of 22% who disagree. However, for those groups who are still studying and students, the proportion that disagrees is slightly higher at 30%. Those who belong to the group that consider themselves as most informed about science disagree the most at 31% and similarly 31% of managers also disagree.

3.3 Science, luck, faith and human rights

- Two in five Europeans are superstitious –

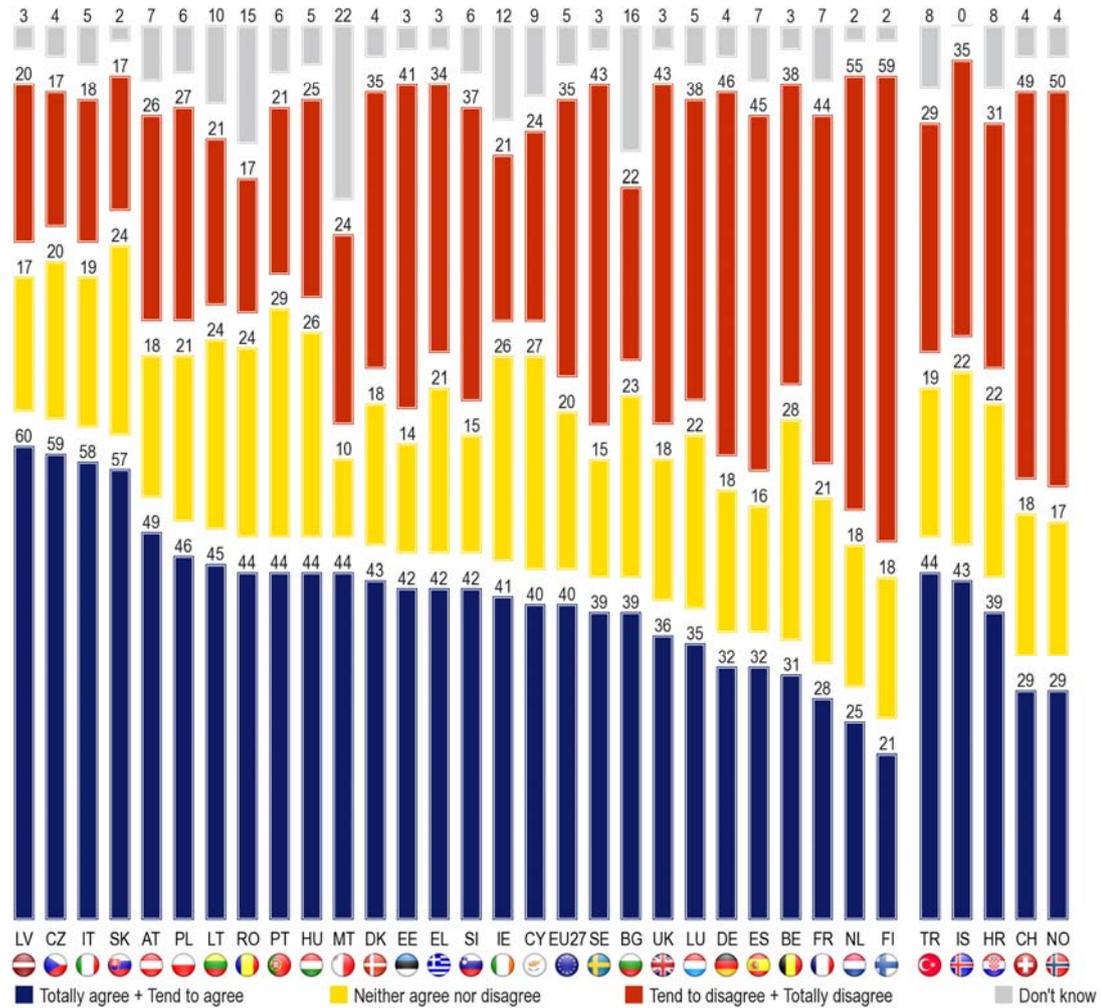
It is a commonly repeated superstition that certain numbers are lucky for specific people²⁶. Europeans are however divided on the idea, 40% of respondents agree and 35% of respondents disagree.

The figure below shows that such superstition is still found mostly among citizens in Latvia (60%), the Czech Republic (59%), Italy (58%) and Slovakia (57%) where a majority of respondents agree that some numbers are luckier than others for some people. Those who are the least convinced are found in Finland where 59% of respondents disagree, the Netherlands where 55% disagree and Norway where 50% disagree.

²⁶ QC7.4 Some numbers are especially lucky for some people.

QC7.4. I would like to read out some other statements. For each of them, please tell me how much you agree or disagree.

Some numbers are especially lucky for some people



Comparing the 2010 findings with those of the 2005 survey we see a slight increase in the proportion of respondents that agree that some numbers can be lucky, from 37% of respondents in 2005 to 40% of respondents in 2010. The proportion that disagrees in 2010 is at 35% lower than the proportion of 41% recorded in 2005.

Most countries show little change over the five years. Notably a few countries show a large 20 percentage point or more decline in those that disagree: Luxembourg from 65% of respondents in 2005 to 38% 2010 and Malta from 44% in 2005 to 24% in 2010.

Looking at the socio-demographic groups, women (41%) are slightly more likely than men (37%) to believe that such numbers actually exist. When we look at those who consider themselves as very interested in scientific discoveries we see that 45% of those respondents disagree while 29% of respondents who are not at all interested in scientific discoveries disagree that some numbers are lucky for some people. It can also be argued that such people who believe in lucky numbers are also more optimistic with a belief that hard facts do not solely predict the outcome and that luck plays a part.

- Opinions are divided between dependence on science or faith. –

Further examining the effect of faith on attitudes towards science held by European citizens we find a public divide concerning the statement that we depend too much on science and not enough on faith²⁷. At the EU27 level, 38% of respondents agree and 34% of respondents disagree. The figure below shows that opinions between countries differ greatly. In Cyprus 66% of respondents agree that we depend too much on science whereas at the other end of the scale only 20% of respondents in Denmark and 23% in the Netherlands and in Norway believe that we depend too much on science.

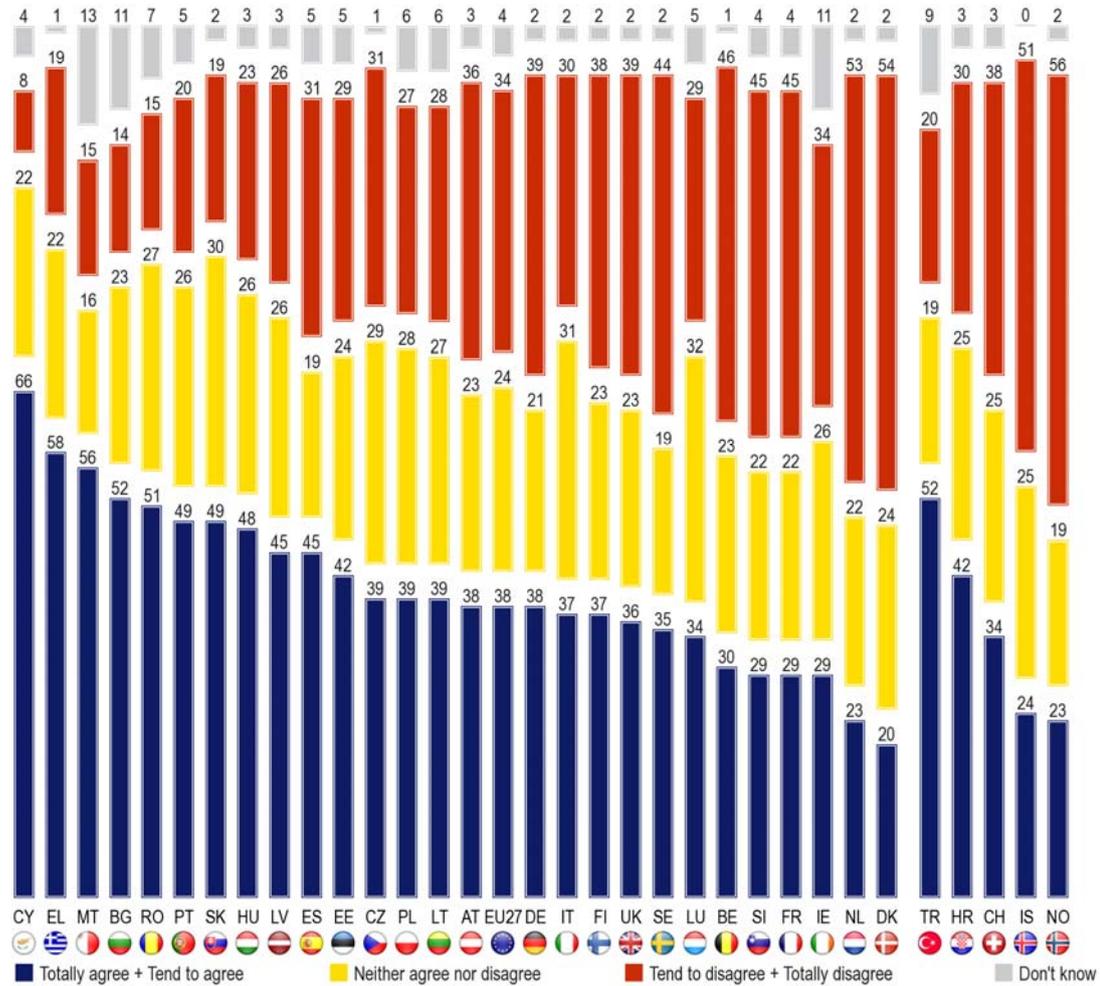
Comparing the 2010 results with those of 2005, we see that overall the level disagreement has increased from 29% to 34% whereas the level of agreement has only shifted slightly (from 40% to 38%).

There are countries where those that agree that we depend too much on science and not enough on faith fell by ten percentage points or more. In Ireland only 29% of respondents agree in 2010, considerably lower than the 41% of respondents in 2005. Romania also shows 51% of respondents who agree in 2010 compared to 61% of respondents in 2005. Conversely, some countries have shown an increase in those that feel that we depend too much on science, 66% of respondents in Cyprus agree in 2010 compared to 51% of respondents in 2005 and 58% of respondents in Greece now agree in 2010 compared to 44% of respondents in 2005.

²⁷ QC6.5 We depend too much on science and not enough on faith.

QC6.5. I would like to read out some statements that people have made about science, technology or the environment. For each statement, please tell me how much you agree or disagree.

We depend too much on science and not enough on faith



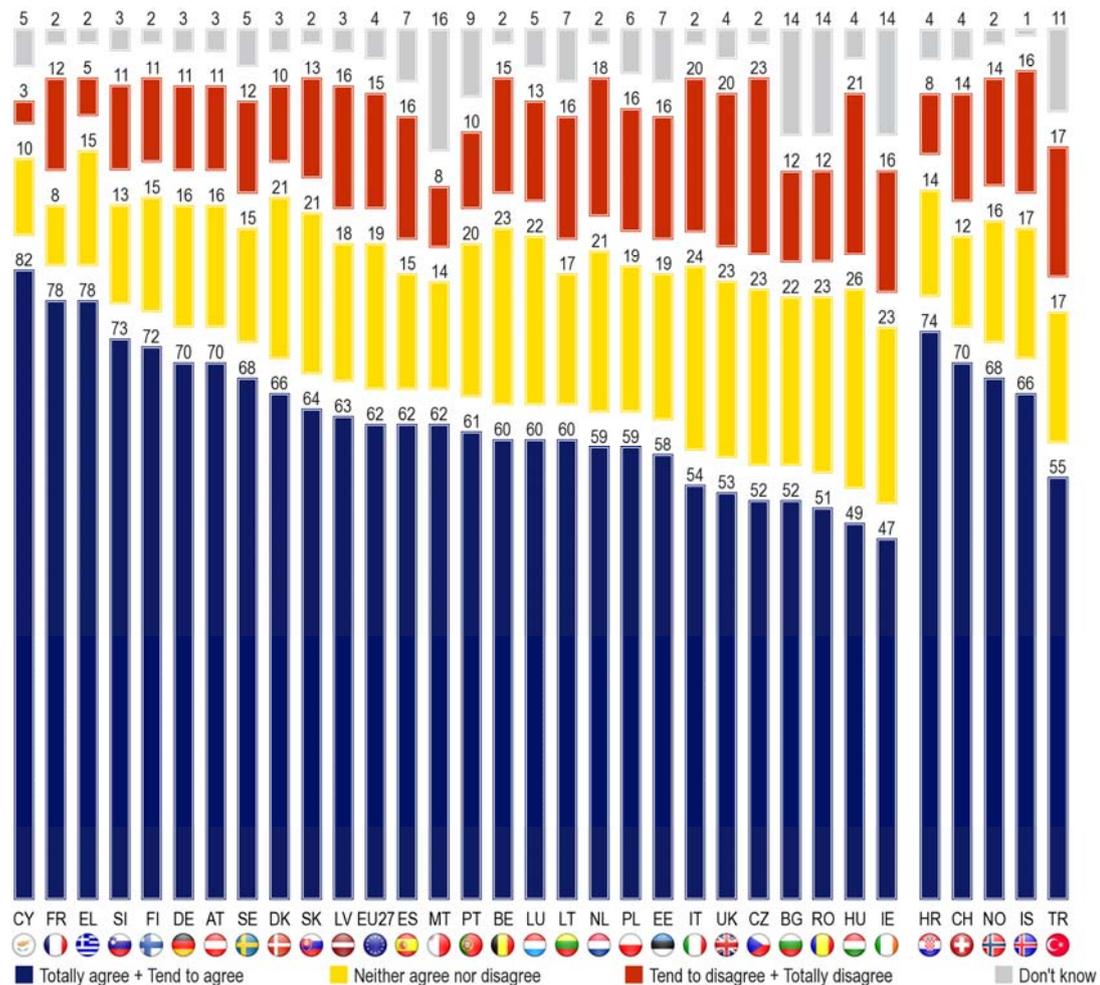
Again for the different social groups there are few marked differences although women are more likely than men to believe that we depend too much on science and not enough on faith (40% vs. 36%). We see again that those who consider themselves to be very interested in science are much more likely to disagree than those who are not at all interested in science (43% vs. 24%).

- Six out of ten Europeans feel that science and technology can sometimes damage people’s moral sense –

Looking at the link between science and technology and people’s moral sense²⁸, we see that a majority of Europeans agrees that science and technology can sometimes damage people’s moral sense (62%) while 15% of respondents disagree at the EU27 level.

QC6.14. I would like to read out some statements that people have made about science, technology or the environment. For each statement, please tell me how much you agree or disagree.

Science and technology can sometimes damage people’s moral sense



²⁸ QC6.14 Science and technology can sometimes damage people’s moral sense.

The figure above shows that country differences exist. Cyprus at 82% of respondents and Greece and France both at 78% of respondents who agree are the countries where more than three quarters of respondents agree. At the lower end of the scale, Ireland at 47% and Hungary at 49% are the only two countries where less than half of respondents agree that science and technology can sometimes damage people's moral sense.

Looking at socio-demographic data, there is little variation for all groups around the EU27 average except for Europeans who are very interested in scientific discoveries being more likely to agree than those who are not interested (64% vs. 54%).

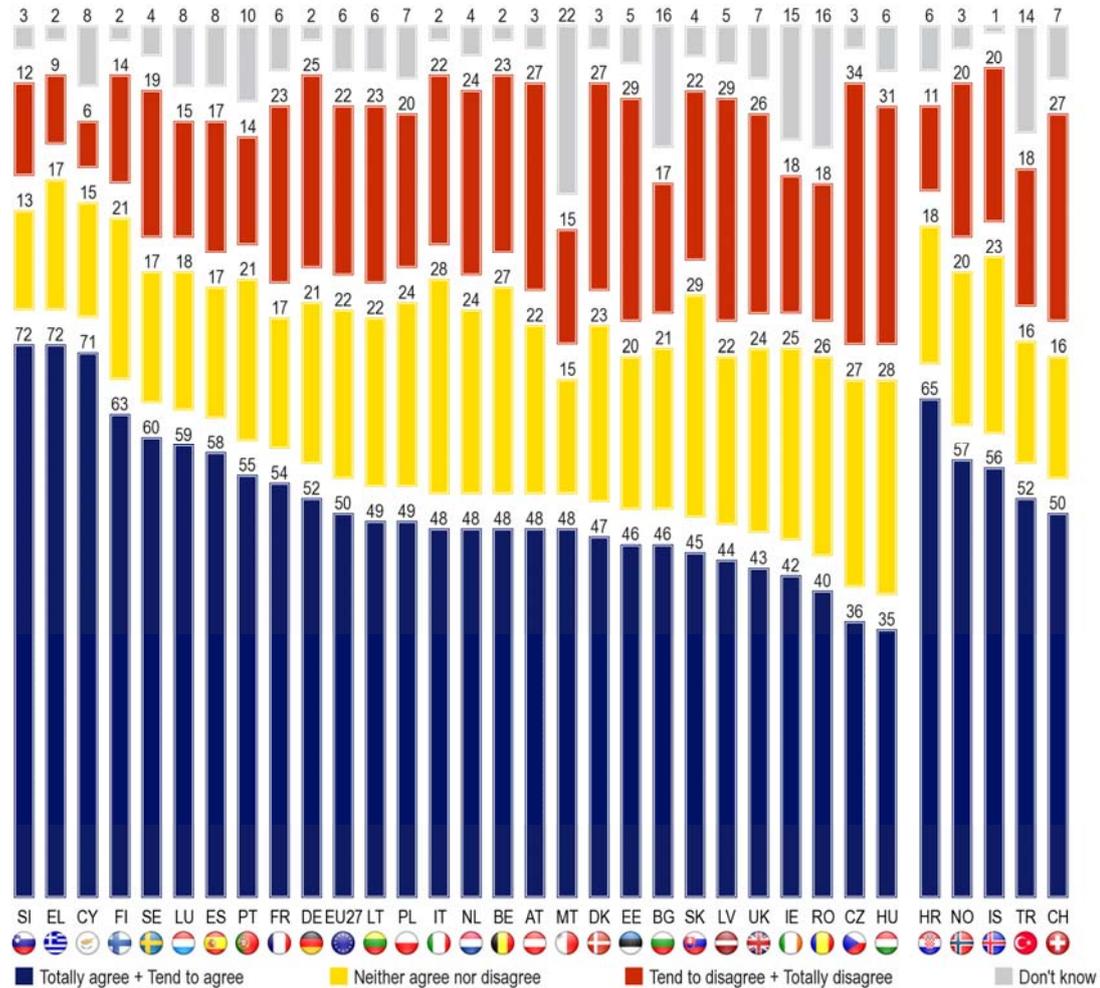
- One European in two feels that the applications of science and technology can threaten human rights –

Concerning human rights and science, one European in two feels that applications of science and technology can threaten human rights while just over one fifth of respondents disagree²⁹.

²⁹ QC6.15 The applications of science and technology can threaten human rights.

QC6.15. I would like to read out some statements that people have made about science, technology or the environment. For each statement, please tell me how much you agree or disagree.

The applications of science and technology can threaten human rights



The figure above shows that country differences are apparent with Slovenia and Greece most in agreement at 72% of respondents, followed by Cyprus at 71%. At the other end of the scale in three countries 40% or less of respondents agree: Hungary (35%), the Czech Republic (36%) and Romania (40%).

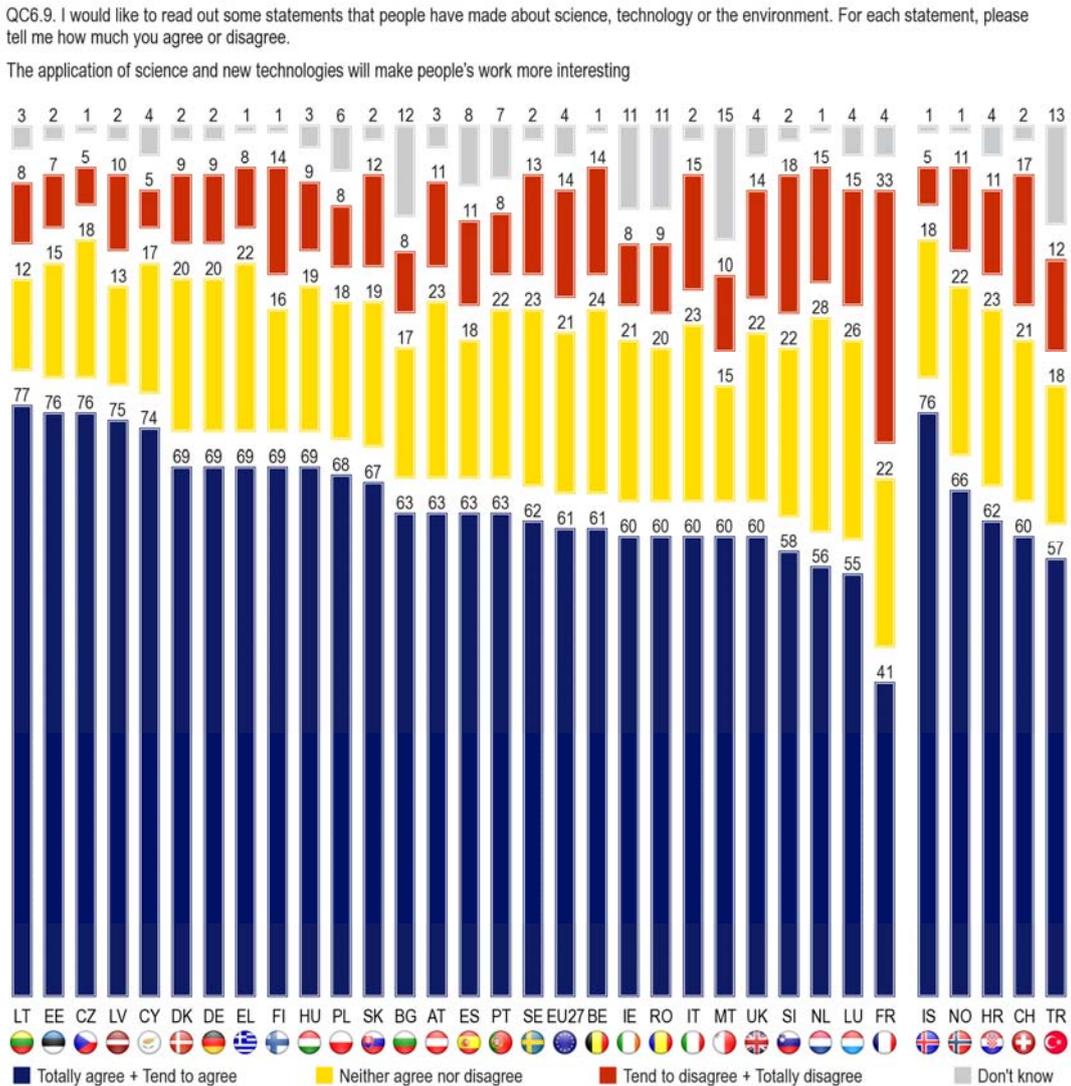
Looking at socio-demographic groupings, the variation around the EU27 average is slight. The largest variation again can be seen for those respondents who feel very interested in science where 52% of those respondents agree while for those with no interest in science only 44% of respondents agree.

3.4 The implication of science and technology in the economy

3.4.1: Making people’s work more interesting

- A clear majority finds that the application of science and new technologies will make people’s work more interesting –

A clear majority of Europeans (61%) agree that people’s work will become more interesting thanks to the application of science and new technologies³⁰. Only 14% of respondents at the EU27 average disagree.



³⁰ QC6.9 The application of science and new technologies will make people’s work more interesting.

The figure above shows that the countries where three quarters or more of respondents agree with this statement are Lithuania (77%), the Czech Republic, Iceland, Estonia (76% each) and Latvia (75%).

A low rate of agreement is notable in France which at 41% of respondents is 20 percentage points below the EU27 average and is the only country where less than half of the respondents agree that science and technology will make people's work more interesting. In 2005, France also had the lowest rate of agreement in 2005 with 58% of respondents at that time agreeing that science will make people's work more interesting. However, the 2010 level is significantly lower.

This is a trend noted in most countries. In 2005 the proportion of Europeans who agreed was 69% compared to 61% in 2010. The general trend is that respondents feel in 2010 less positive that science will make people's work more interesting. There are only three countries where we see no significant change in the proportion of respondents agreeing since 2005: Greece from 68% in 2005 to 69% in 2010, Spain from 62% to 63% and Cyprus with 74% both in 2005 and 2010.

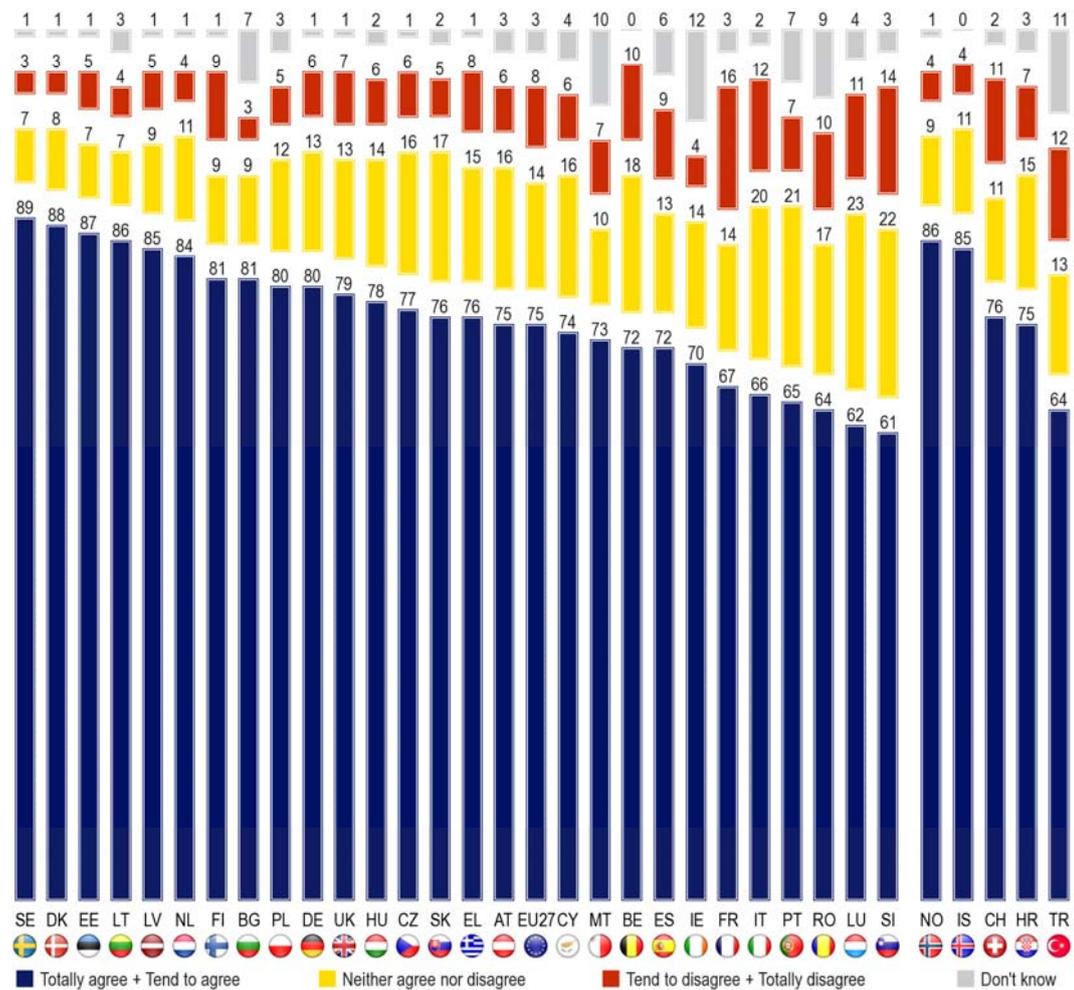
3.4.2: More opportunities for future generations

- Thanks to science and technology, there will be more opportunities for future generations –

Three quarters of respondents in the European Union also agree that thanks to science and technology, there will be more opportunities for future generations³¹. In total, 75% of respondents agree at the EU27 level, while only 8% of respondents disagree.

QC6.12. I would like to read out some statements that people have made about science, technology or the environment. For each statement, please tell me how much you agree or disagree.

Thanks to science and technology, there will be more opportunities for future generations



³¹ Q6.12 Thanks to science and technology, there will be more opportunities for future generations.

The figure above shows that in each European country there is widespread agreement with this statement. There are however differences with Sweden at 89%, Denmark at 88%, Estonia at 87% and Norway and Lithuania both at 86% of respondents showing agreement with this statement, against significantly fewer in Slovenia at 61%, Luxembourg at 62% and Turkey and Romania both at 64% of respondents in agreement.

When we compare the results for this question in 2010 with the earlier survey of 2005 we see that the level of agreement has decreased very slightly, by 2 percentage points, from 77% to 75%. For the most part, agreement responses in countries have decreased by a few percentage points. A larger decrease is measured in Luxembourg (from 78% to 62%), Poland (from 93% to 80%) and Romania (from 76% to 64%). A number of countries have shown the opposite: in Greece and Slovakia we see an increase in agreement levels from 70% to 76%, in Spain from 66% to 72%, in Denmark from 84% to 88%, in Finland and Bulgaria from 77% to 81%, in Austria from 71% to 75% and in Germany from 77% to 80%.

When looking at socio-demographic data, we see little variation around the EU27 average 75% of respondents who agree. Those still studying agree at a higher level (80%) and again, Europeans who are very interested in science (81%) are more likely to agree than those who are not at all interested (63%) or informed (69%).

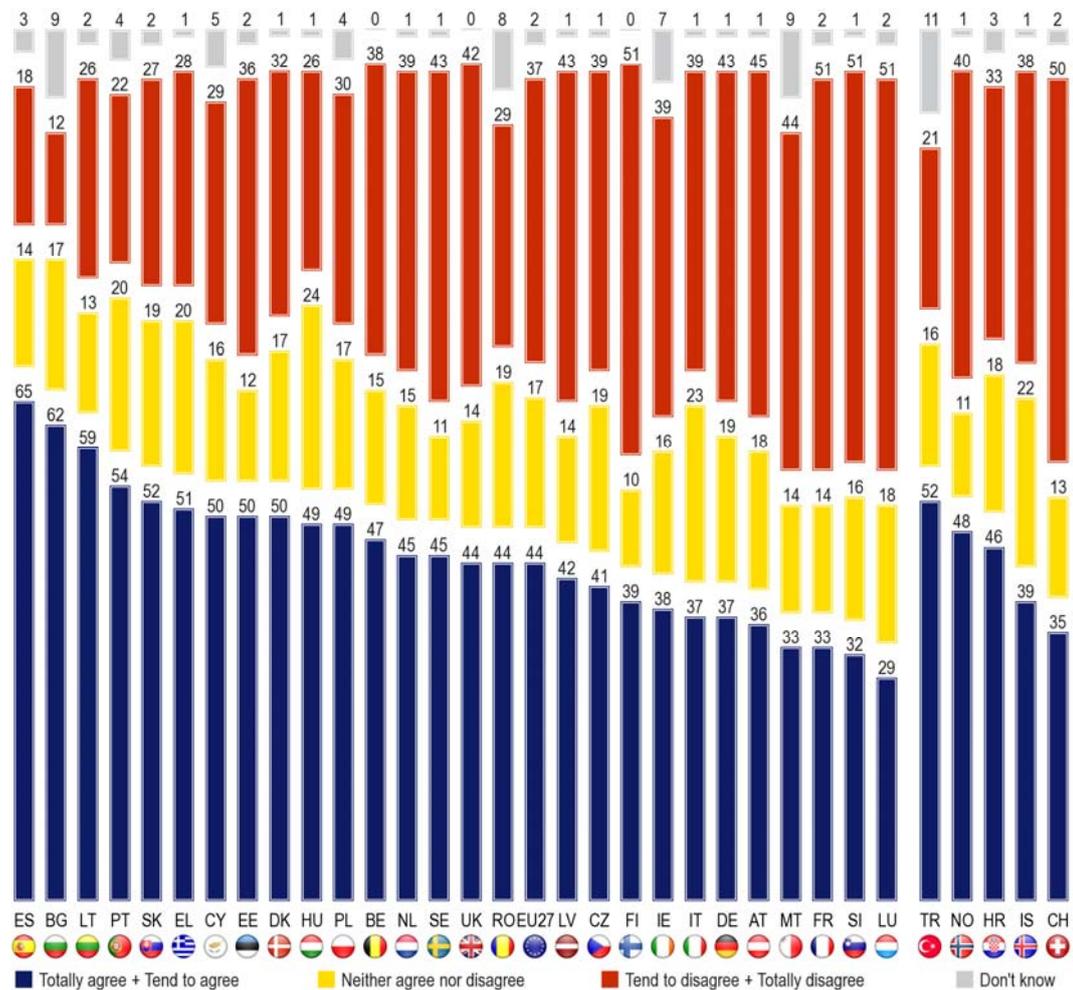
3.5 Science and animal testing

- Europeans are divided when considering if scientists should be allowed to experiment on animals like dogs and monkeys. –

European public opinion is fairly divided on whether scientists would be allowed to experiment on animals even if this leads to obvious benefits for human health³². On this question, 44% of respondents at the EU27 level are in agreement and 37% of respondents are in disagreement.

QC6.7. I would like to read out some statements that people have made about science, technology or the environment. For each statement, please tell me how much you agree or disagree.

Scientists should be allowed to experiment on animals like dogs and monkeys if this can help sort out human health problems



³² QC6.7 Scientists should be allowed to experiment on animals like dogs and monkeys if this can help sort out human health problems.

When looking at country differences, the figure above shows the variation in opinion between respondents in different countries. While 65% of respondents in Spain agree, only 29% of respondents in Luxembourg, and 32% of respondents in Slovenia agree.

There are several countries where half or more of respondents agree. Apart from Spain, these are Bulgaria at 62% of respondents, Lithuania at 59% of respondents, Portugal at 54% of respondents, Slovakia and Turkey at 52% of respondents, Greece at 51% of respondents and Denmark, Estonia and Cyprus at 50% of respondents who agree. At the other end of the scale, there are five countries where half or more of respondents disagree: Finland, Slovenia, Luxembourg and France at 51% of respondents, and Switzerland at 50% of respondents.

Comparing the results of this survey with those from the survey in 2005 we see that average agreement levels have hardly changed in 2010 (-1), while disagreement levels have gone up by 3 percentage points (from 34 at the EU25 level in 2005). This suggests a somewhat more critical stance on the ethical aspects of science and technological development.

Looking at the socio-demographic groups, there is a difference between men and women where 49% of men are likely to agree compared to only 39% of women. Apart from men, the following groups are most likely to agree: respondents who consider themselves right of centre politically (50%), managers (49%), those interested in science (48%) and those who consider themselves well informed about scientific discoveries (47%).

- In approving animals testing, Europeans distinguish between the type of animal –

European citizens appear less sensitive to the use of animals like mice in science compared to use of dogs or monkeys. The majority (66%) find that scientists should be allowed to do research on animals like mice if it produces new information about human health problems, while only 18% of respondents disagree³³. As seen earlier only 44% of respondents find animal testing acceptable when larger animals such as dogs and monkeys are the subject.

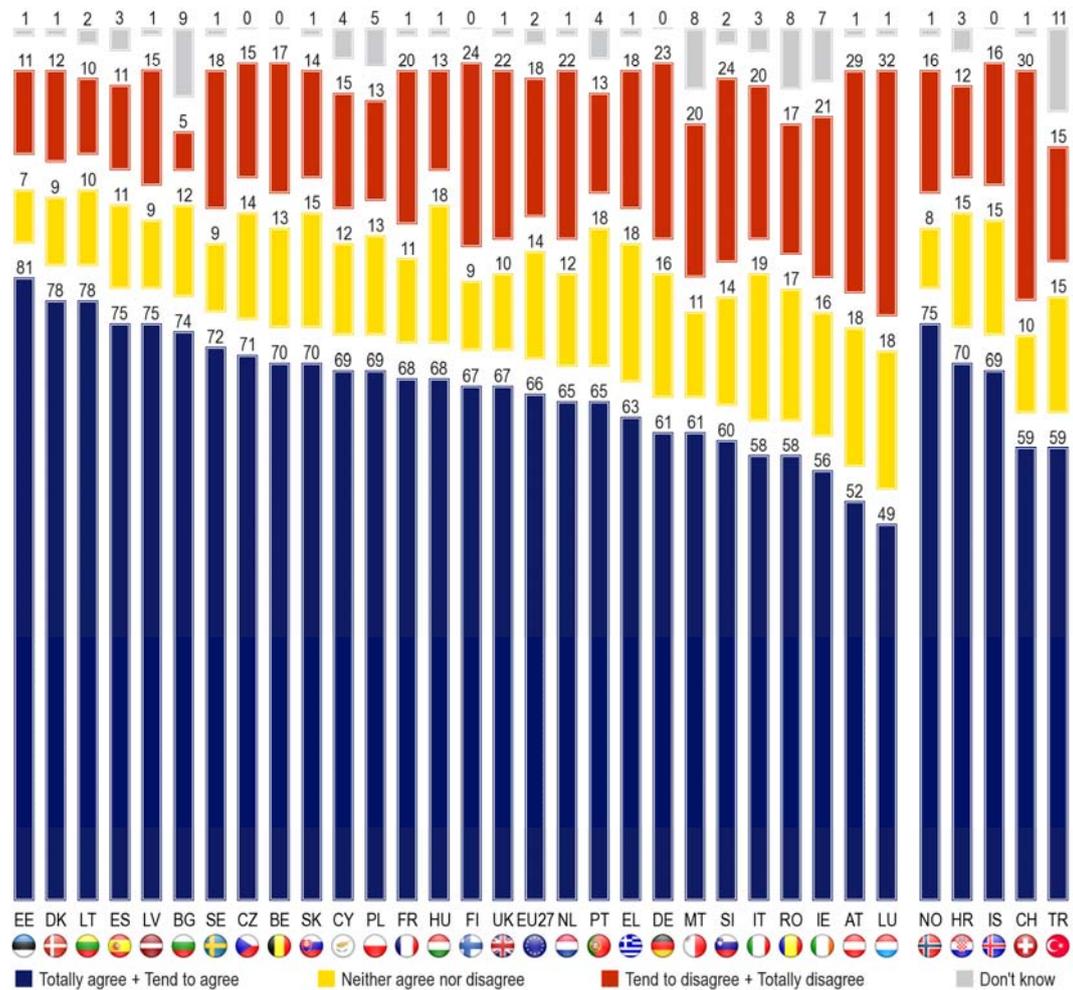
³³ QC6.13 Scientists should be allowed to do research on animals like mice if it produces new information about human health problems.

The next figure shows large country differences also when it comes to using animals like mice for research purposes. There are six countries where more than three quarters of respondents approve of using mice for animal testing: Estonia at 81% of respondents, Denmark and Lithuania at 78% and Spain, Latvia and Norway at 75%.

Highest opposition to using animals like mice for testing exists in Luxembourg (32%) and Switzerland (30%).

QC6.13. I would like to read out some statements that people have made about science, technology or the environment. For each statement, please tell me how much you agree or disagree.

Scientists should be allowed to do research on animals like mice if it produces new information about human health problems



Looking at the socio-demographic data, we see that managers at 70%, those who are very interested in science at 72% or well informed about scientific discoveries at 70%, and those who consider themselves right of the political centre at 71% are the only groups where 70% or more are likely to agree that experiments on mice should be allowed if it helps solve human health problems.

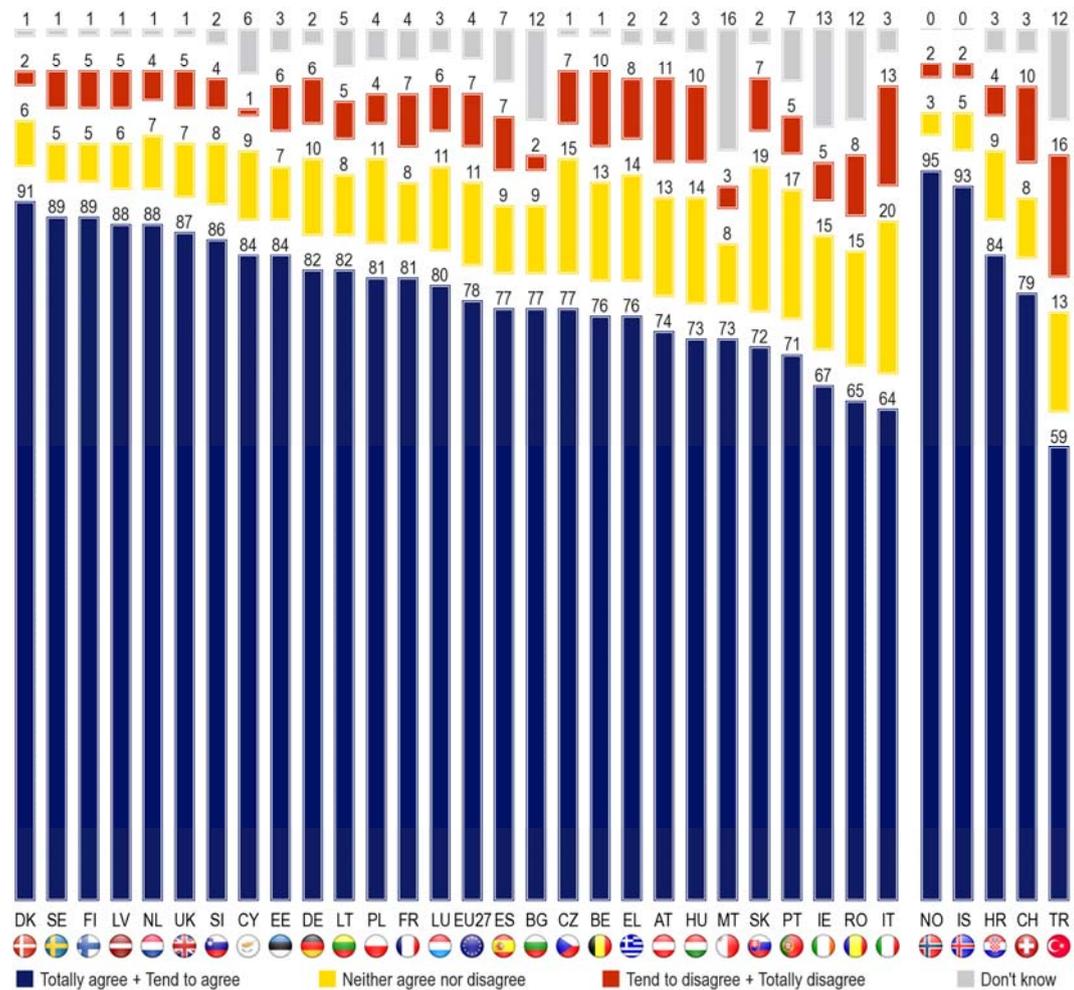
3.6 Science and terrorism

- Europeans express concern that science and technology could be used by terrorists in the future –

Over three in four Europeans (78%) believe that science and technology could be used by terrorists in the future³⁴ and only 7% of respondents disagree at the EU27 level.

QC6.16. I would like to read out some statements that people have made about science, technology or the environment. For each statement, please tell me how much you agree or disagree.

Science and technology could be used by terrorists in the future



³⁴ QC6.16 Science and technology could be used by terrorists in the future.

The figure above shows that at the country level, concern is most widespread in Norway (95%), Iceland (93%) and Denmark (91%).

More than two thirds of respondent in the majority of the countries are in agreement however and only three countries have less than two in three respondents who agree: Romania (65%), Italy (64%), with Turkish respondents at 59% least likely to express concern.

Looking at the socio-demographic data, respondents who are very interested in science (85%), the very informed and those who stayed in full-time education until age 20 or older agree (84%) and managers (83%) most frequently agree that science and technology could be used by terrorists in the future.

3.7 Science and the environment

- Science and technology can play a role in improving the environment. –

A clear majority of Europeans is of the view that science and technology can play a role in improving the environment. The survey shows that 54% of respondents **disagree** with the statement that science and technology **cannot** play a role in improving the environment³⁵. Only 24% agree that science **cannot** play a role at the EU27 level.

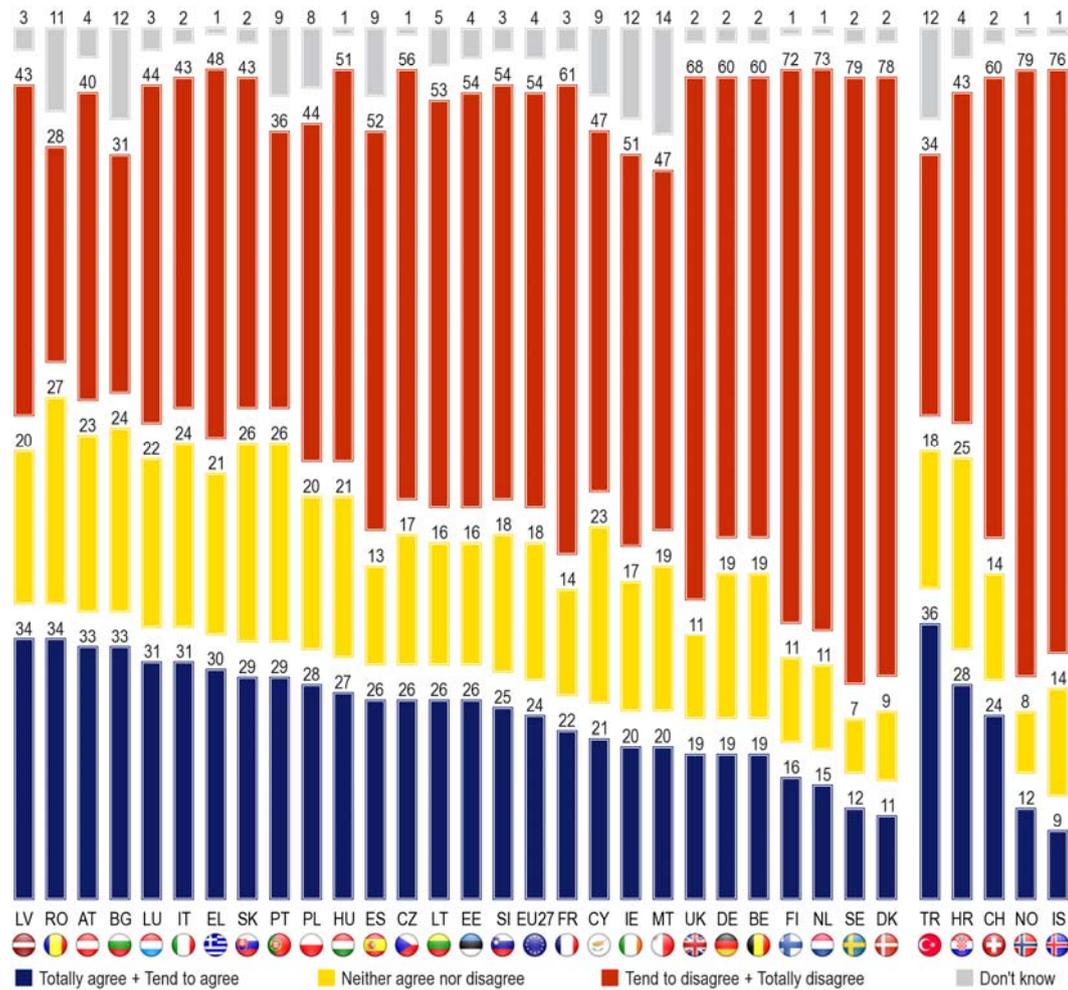
The figure below shows large differences between countries, with Northern Europeans most inclined to find that science and technology can play a role in improving the environment. In both Sweden and Norway around 8 in 10 respondents (79%) **disagree** with the statement that science **cannot** play a role in improving the environment. Five further countries showed more than two thirds of respondents who disagree: Denmark at 78%, Iceland at 76%, the Netherlands at 73%, Finland at 72% and the United Kingdom at 68%.

At the other end of the scale, Romanians express the lowest level of belief that science can help in environmental improvements: only 28% of respondents disagree with the statement and 34% of respondents agree.

³⁵ QC6.6 Science and technology **cannot** really play a role in improving the environment.

QC6.6. I would like to read out some statements that people have made about science, technology or the environment. For each statement, please tell me how much you agree or disagree.

Science and technology cannot really play a role in improving the environment



When we compare the 2010 findings with those of the 2005 study, we see a slight shift towards disagreement with the statement suggesting a more positive overall view of the role science and technology in environmental issues. In 2005, 50% of respondents at the EU25 level disagreed while in 2010 54% of respondents at the EU27 level disagree.

However, seven countries show the opposite trend. Belgium with 65% of respondents who disagreed in 2005 now has 60% of respondents disagreeing (-5), Ireland (-8), Malta (-7), the Czech Republic (-5), Portugal (-4) Poland (-3) and Slovenia (-2).

This effect is counteracted by some countries that show a major shift towards disagreement: respondents in Iceland from 49% of respondents in 2005 to 76% of respondents in 2010 (+27) and Spain from 32% of respondents in 2005 to 52% of respondents in 2010 (+20) who disagree.

Of the social groups, the figure below shows that managers (72%) are most likely to disagree with the statement. Again, the results show the by now familiar difference in opinion between respondents who are very interested/informed and those who are not interested/informed. Those who are more familiar and comfortable with science issues have a more positive picture of the contribution that science can play in environmental improvements.

QC6.6 I would like to read out some statements that people have made about science, technology or the environment. For each statement, please tell me how much you agree or disagree.

Science and technology cannot really play a role in improving the environment

	Agree	Disagree
EU27	24%	54%
Respondent occupation scale		
 Self-employed	23%	57%
Managers	16%	72%
Other white collars	23%	57%
Manual workers	27%	52%
House persons	27%	45%
Unemployed	28%	49%
Retired	26%	48%
Students	21%	59%
Interested in scientific discoveries		
Yes, very	20%	67%
Yes, moderately	24%	54%
No	30%	37%
Informed about scientific discoveries		
Yes, very well	23%	64%
Yes, moderately	23%	59%
No	26%	46%

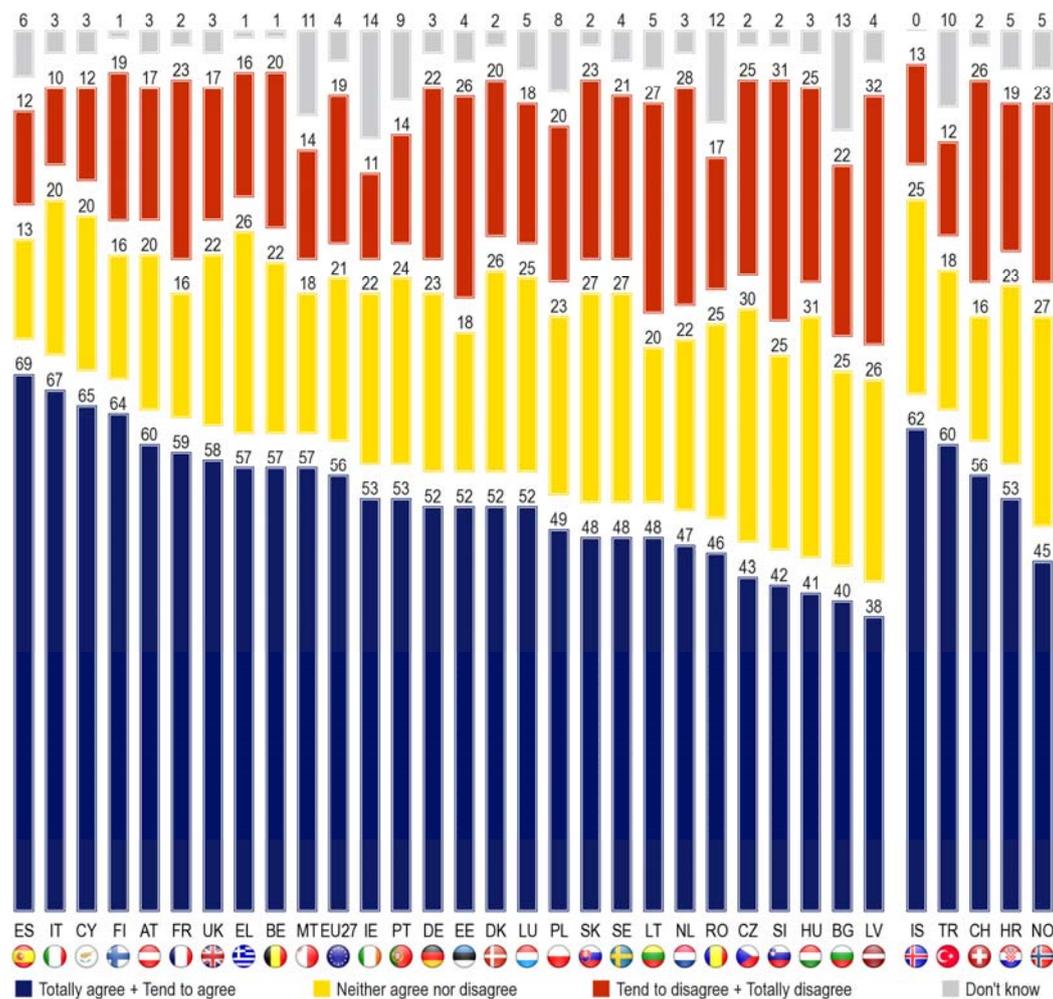
3.8 Science and health

- Europeans in majority express the view that most people think that science and technology make their lives healthier. –

At the beginning of the report we already reported that a majority of Europeans find that science and technology make their lives healthier³⁶. The survey further shows that respondents believe that other people share this view: 56% of respondents agree with the statement that most people think that science and technology are making their lives healthier while 19% of respondents are in disagreement at the EU27 level³⁷.

QC7.10. I would like to read out some other statements. For each of them, please tell me how much you agree or disagree.

Most people think that science and technology are making their lives healthier



³⁶ QC6.1 and 6.2.

³⁷ QC7.10 Most people think that science and technology are making their lives healthier.

The figure above shows only two countries where more than two thirds of respondents agree, Spain at 69% of respondents and Italy at 67% of respondents. At the other end of the scale, Bulgaria has only 40% of respondents and Latvia has only 38% of respondents who agree. Latvia also has the highest disagreement level (32%) followed by respondents in Slovenia (31%).

The socio-demographic data shows that men are slightly more likely to agree than women (60% vs. 53%). Again, those very interested in science are more likely to agree than respondents with no interest in science (61% vs. 47%).

3.9 Science, risk and return

- *Scientific research which adds to knowledge should be supported by Government* –

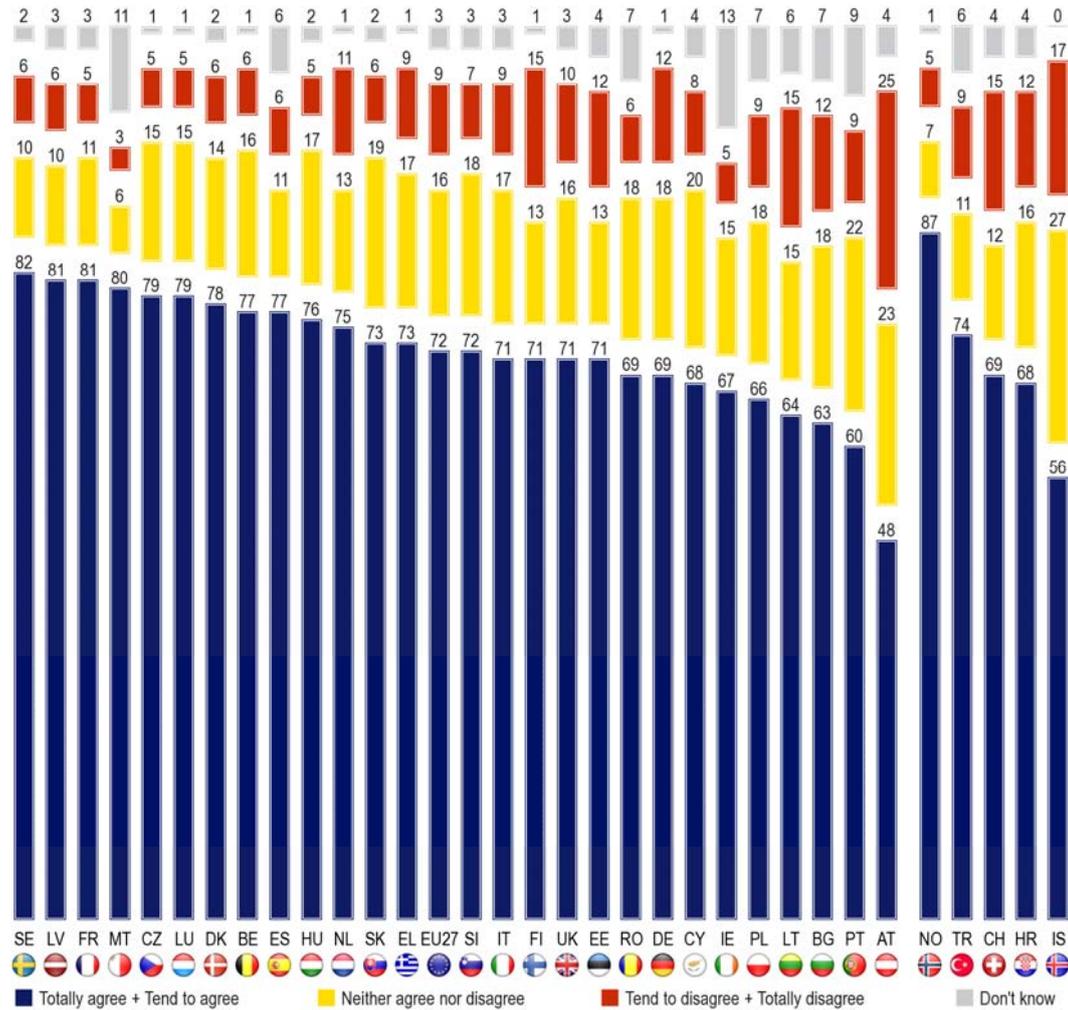
A majority of Europeans agree that scientific research should be supported by the government even if brings no obvious immediate benefits³⁸. At the EU27 level, 72% of respondents agree with the statement and only 9% disagree.

The next figure shows that in the 2010 study, Norway shows the highest level of agreement at 87% of respondents. There are only six countries where two thirds or less of respondents are in agreement, Poland at 66% of respondents, Lithuania at 64% of respondents, Bulgaria at 63% of respondents, Portugal at 60% of respondents, Iceland at 56% of respondents and Austria at 48% of respondents.

Comparing the findings in 2010 with the study undertaken in 2005, we see that the EU27 average of 72% is slightly lower than in the study of 2005 where 76% of respondents agreed at the EU25 level. The slight change in those that agree is seen for many countries although six countries show the opposite: Norway shows 84% of respondents in 2005 vs. 87% in 2010 who agree that even if it brings no immediate benefits, scientific research which adds to knowledge should be supported by Government, Latvia 75% in 2005 vs. 81% in 2010, Luxembourg 73% in 2005 vs. 79% in 2010, Finland 70% in 2005 vs. 71% in 2010, Lithuania 63% in 2005 vs. 64% in 2010 and Spain 67% in 2005 vs. 77% in 2010.

³⁸ QC7.1 Even if it brings no immediate benefits, scientific research which adds to knowledge should be supported by Government.

QC7.1. I would like to read out some other statements. For each of them, please tell me how much you agree or disagree.
 Even if it brings no immediate benefits, scientific research which adds to knowledge should be supported by Government

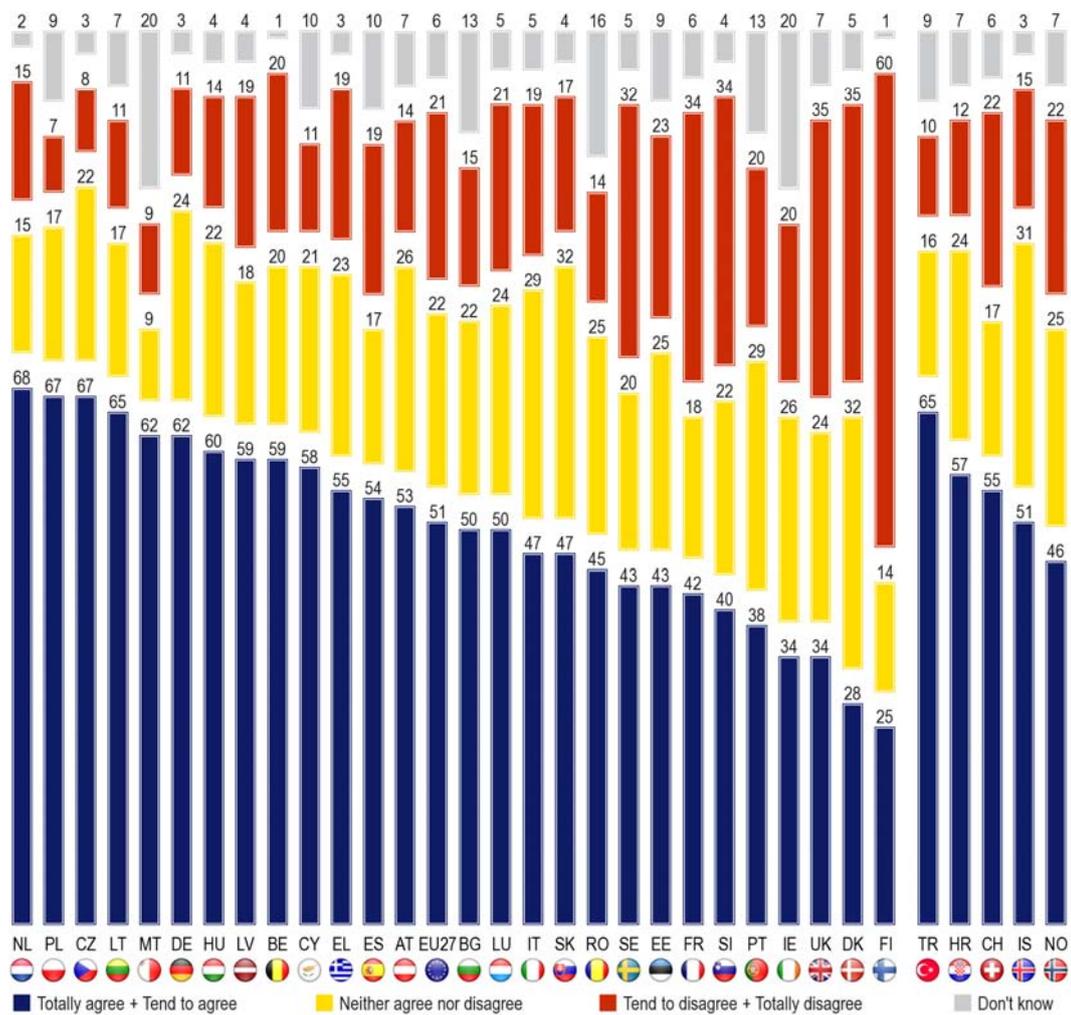


Looking at the socio-demographics data, again Europeans who are very interested in scientific discoveries are significantly more likely to agree than those no interest in science (82% vs. 57%). The same pattern is seen for those who feel that they are very well informed about science where 83% of respondents agree compared to 65% of respondents who feel not at all informed about science.

- Just over half of Europeans agree that new inventions will always be found to counteract any harmful use of science –

A slim majority of European citizens, 51% of respondents, now agree that new inventions will always be found to counteract any harmful effect of scientific and technological developments³⁹. Only 21% of respondents at the EU27 level disagree.

QC7.2. I would like to read out some other statements. For each of them, please tell me how much you agree or disagree.
New inventions will always be found to counteract any harmful effect of scientific and technological developments



³⁹ QC7.2 New inventions will always be found to counteract any harmful effect of scientific and technological developments.

The figure above shows the variation between countries. In this study, respondents in the Netherlands (68%), Poland and the Czech Republic (67% each) have the highest level of agreement. At the other end of the scale, we find that agreement in Finland is very low at 25%. It is the only country where an outright majority (60%) disagrees.

Four further countries show more than a third of respondents who disagree that new inventions will always be found to counteract any harmful effect of scientific and technological developments: Denmark and the United Kingdom at 35% and France and Slovenia at 34%.

Comparing the 2010 findings with those of 2005, the agreement level is now slightly higher than in 2005 (+3). However, there is no change in the level of disagreement and the variation for most countries is slight. Only two countries show a large change. Respondents in Denmark disagreed with 53% in 2005 and this is now 35% of respondents. Similarly, 60% of respondents in Slovenia in 2005 disagreed which has fallen to 34% in 2010.

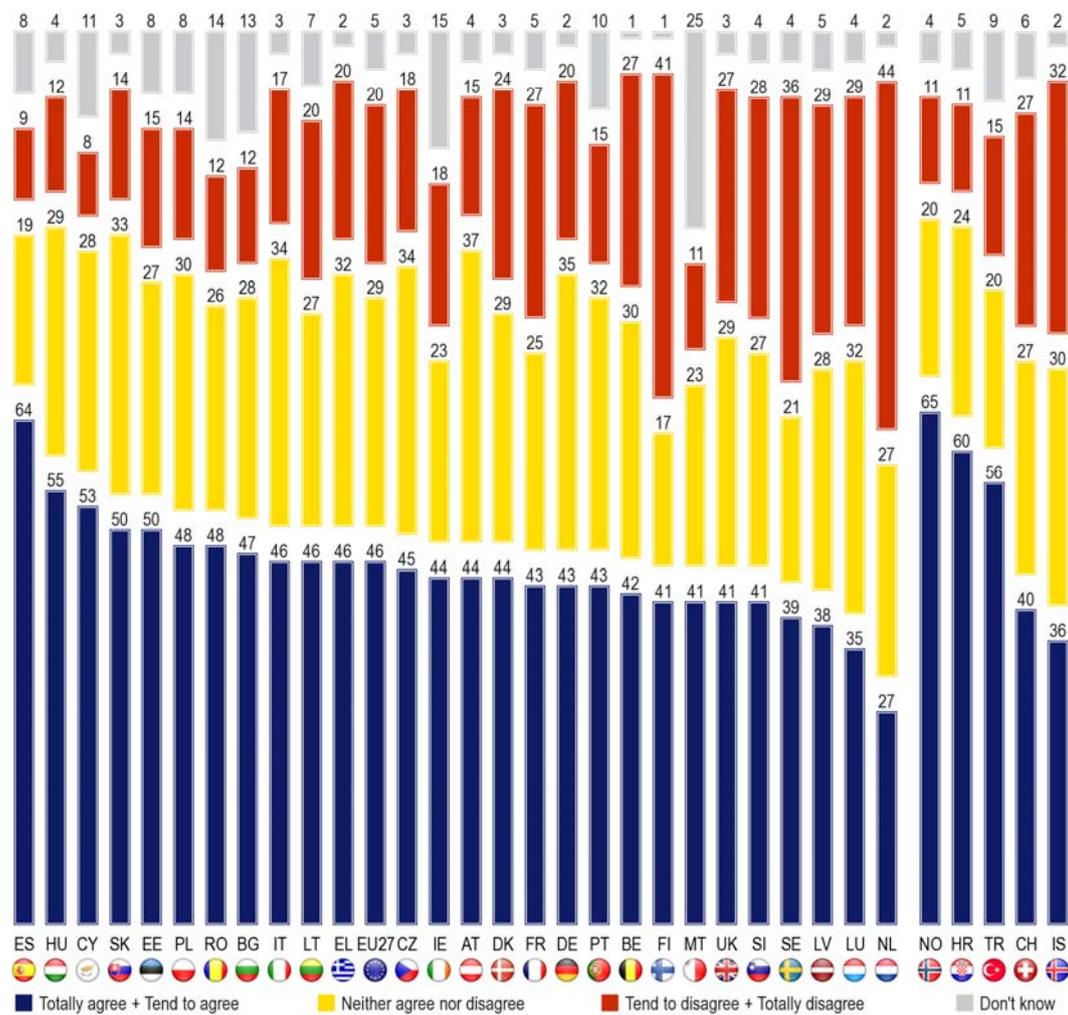
Overall, there is only a very slight movement towards more agreement that new inventions will always be found to counteract any harmful effect of scientific and technological developments.

Looking at the socio-demographic data, there is little differentiation between the social groups but again those who are interested in and informed about scientific developments are more likely to agree. Amongst those who disagree, only managers stand out: 30% disagree which is significantly above the EU27 average of 21%.

- Close to half of Europeans agree that benefits of science are greater than any harm –

Close to half of Europeans, 46% of respondents at the EU27 level, agree that the benefits of science are greater than any harmful effects it may have⁴⁰. In this study Norway has the highest level of agreement at 65% of respondents and the Netherlands the lowest at 27% of respondents.

QC7.3. I would like to read out some other statements. For each of them, please tell me how much you agree or disagree.
The benefits of science are greater than any harmful effects it may have



⁴⁰ QC7.3 The benefits of science are greater than any harmful effects it may have.

The figure above shows the differences between countries. In addition to Norway, there are seven countries where half or more of respondents agree: Spain at 64%, Croatia at 60%, Turkey at 56%, Hungary at 55%, Cyprus at 53% and Slovakia and Estonia at 50%.

Comparing the 2010 study with the 2005 study now shows a slightly lower level of agreement (-6). Those who now disagree that the benefits of science are greater than any harmful effect it may have has increased from 14% of respondents at the EU25 level in 2005 to 20% of respondents at the EU27 level in 2010.

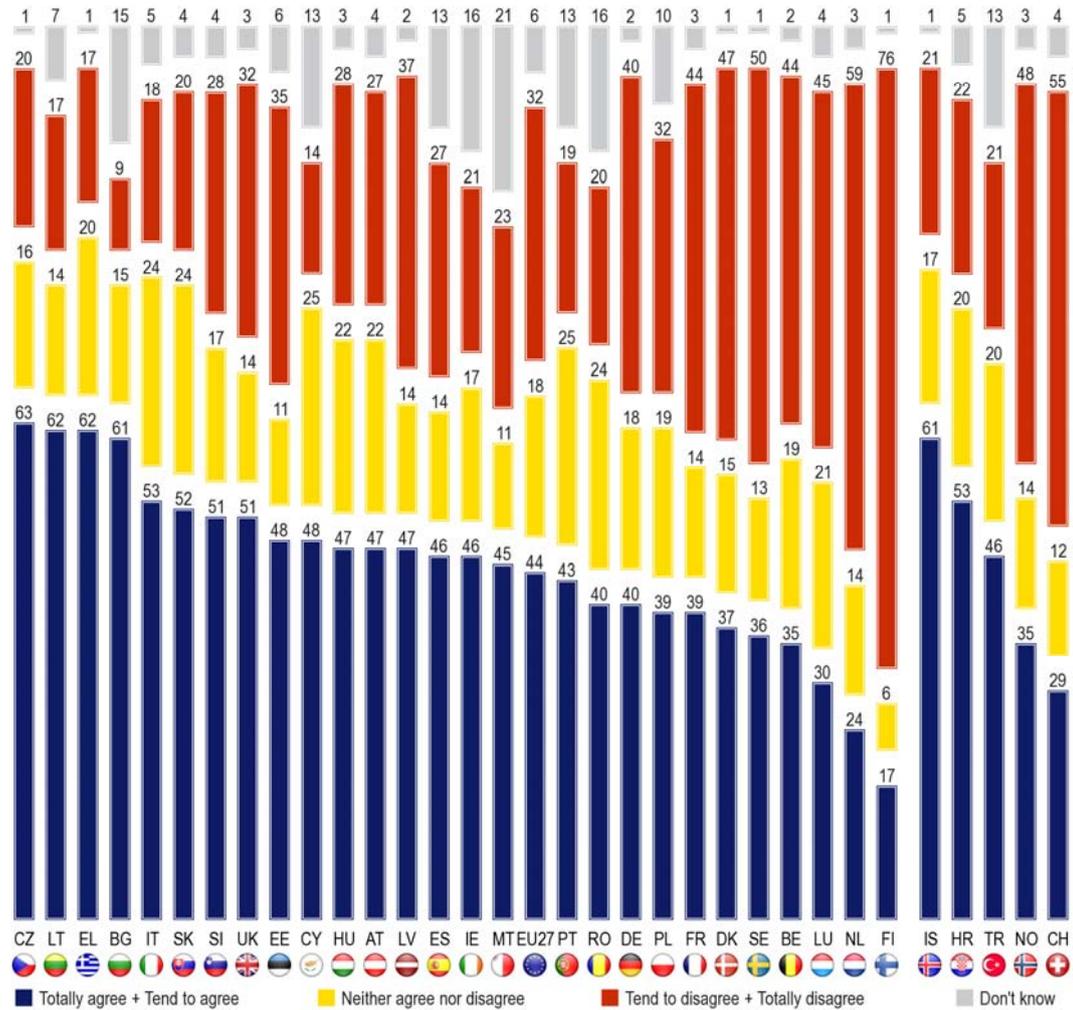
Looking at the socio-demographic data, there is little differentiation between the social groups but retired people, those who consider themselves to be right of political centre and again those who are very interested in and well informed about scientific developments are the only groups where half or more respondents agree. Again, polarity can be seen on the basis of interest in science, where 50% of respondents of who are very informed about science agree compared to 38% of respondents who are not at all interested in science.

- Over two out of five Europeans feel that science may be able to give a complete picture of nature and the universe –

Europeans are not very convinced that science will provide all the answers. Over two out of five Europeans (44% at the EU27 level) agree that in the future science will be able to give a complete picture of nature and the universe but close to a third (32%) disagrees⁴¹. In this study respondents in the Czech Republic show the highest level of agreement at 63% and respondents in Finland the lowest at 17%. In Finland, 76% of respondents disagree.

⁴¹ QC7.5 Someday science will be able to give a complete picture of how nature and the universe work.

QC7.5. I would like to read out some other statements. For each of them, please tell me how much you agree or disagree.
 Some day science will be able to give a complete picture of how nature and the universe work



The figure above shows the range of opinion between countries. In ten countries are there more than 50% of respondents who agree that science may be able to give a complete picture of nature and the universe: the Czech Republic at 63%, Lithuania and Greece at 62%, Bulgaria and Iceland at 61%, Italy and Croatia at 53%, Slovakia at 52% and the United Kingdom and Slovenia at 51%.

Indeed, respondents in many countries are less convinced and there are nine countries where those respondents who disagree outnumber those respondents who agree. Apart from Finland, this is the case in the Netherlands where 24% of respondents agree and 59% of respondents disagree, in Switzerland, where 29% of respondents agree and 55% of respondents disagree, in Norway where 35% of respondents agree and 48% of respondents disagree, in Belgium where 35% of respondents agree and 44% of respondents disagree, in Sweden where 36% of respondents agree and 50% of respondents disagree, in Denmark where 37% of respondents agree and 47% of respondents disagree, in Luxembourg where 30% of respondents agree and 45% of respondents disagree and in France where 39% of respondents agree and 44% of respondents disagree.

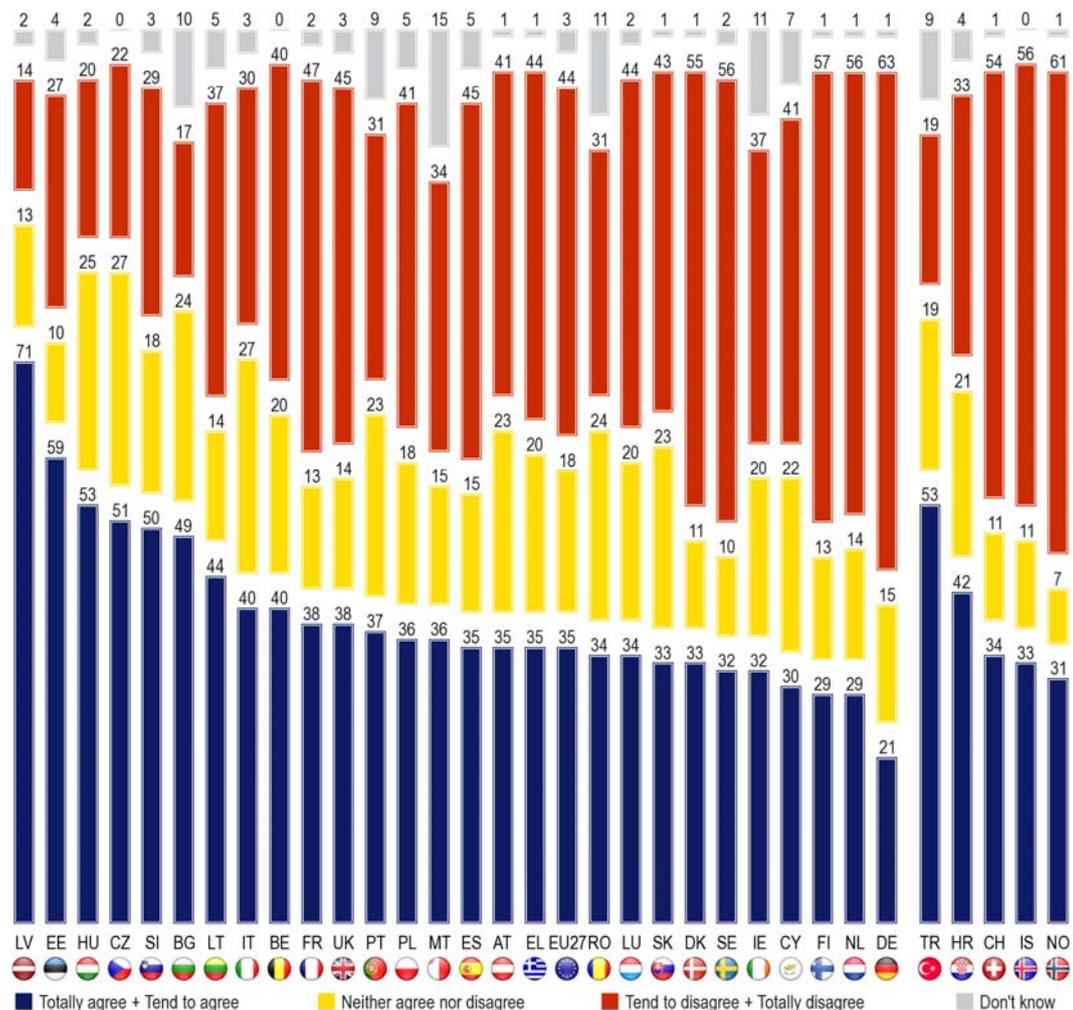
Looking at the socio-demographic data, there is again very little differentiation between the social groups apart from the polarised public opinion between those who are interested in or informed about science and those who are not interested or informed. The interested and informed are more likely to be positive about science providing the complete picture of nature and the universe. Among the interested, half of the respondents agree, compared to 37% of respondents who are not interested. 53% of respondents that feel well informed about scientific developments agree, compared to 40% of respondents of who do not feel informed.

- Science should have limits. -

Europeans feel, albeit not very strongly, that science should have limits and operate between defined boundaries. Any enthusiasm for no limits to science is on the whole low. Only 35% of respondents agree that there should be **no** limits to what science is able to investigate while 44% of respondents disagree⁴². Latvia at 71% of respondents in agreement is exceptionally high and at 14% also has the lowest proportion of respondents disagreeing.

QC7.6. I would like to read out some other statements. For each of them, please tell me how much you agree or disagree.

Science should have no limits to what it is able to investigate



⁴² QC7.6 Science should have no limits to what it is able to investigate.

The figure above shows differences at country level. Six countries show that half or more of respondents agree that science should have **no** limits: Latvia at 71% of respondents, Estonia at 59%, Hungary and Turkey both at 53%, the Czech Republic at 51% and Slovenia at 50%.

For the opposing view, there are eight countries where more than half of respondents disagree with the statement and think science should have limits, Germany at 63% of respondents, Norway at 61%, Finland at 57%, Sweden, Iceland and the Netherlands all at 56%, Denmark at 55% and Switzerland at 54%.

Looking at the socio-demographic data, overall, the majority among all social groups prefers limits to science as opposed to no limitation. Gender has an influence where 41% of respondents who are men will disagree while a higher proportion of women at 47% of respondents disagree. Managers are the only group where more than half, 52% of respondents, disagree and are more likely to wish to see science operating within limits.

Again, for the group who are very interested in science 42% of respondents are likely to agree that science should have no limit, while for the group who has no interest in science only 29% of respondents agree. Those feeling very well informed about science agree with 46% while those who are not at all informed agree at 30%.

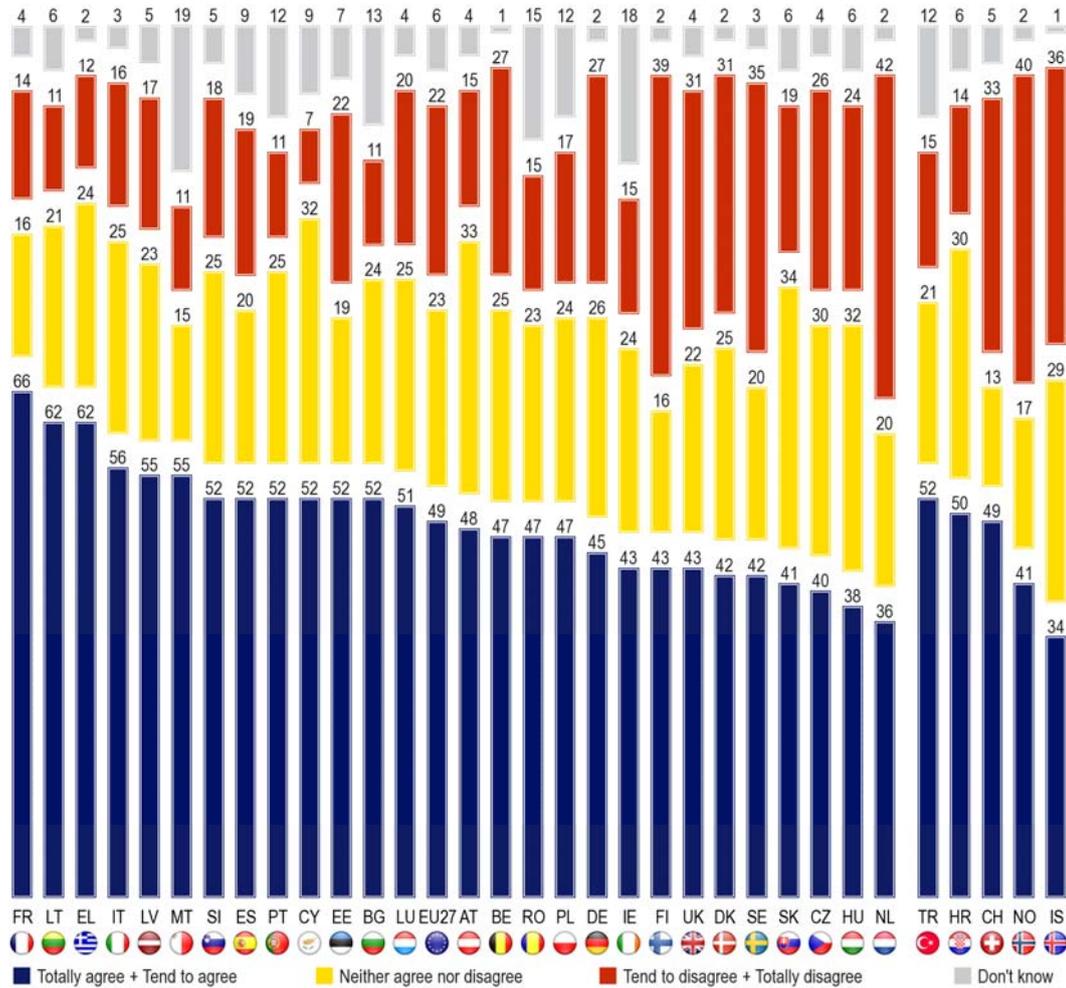
- If risks are uncertain, we should consider stopping the development –

One European in two (49% of respondents at the EU27 level) agrees that if a new technology poses a risk that is not yet fully understood, the development of this technology should be stopped even if benefits are expected⁴³. Only 22% of respondents at the EU27 level disagree with the statement.

⁴³ QC7.7 If a new technology poses risks that are uncertain and not yet fully understood, the development of this technology should be stopped even if benefits are expected.

QC7.7. I would like to read out some other statements. For each of them, please tell me how much you agree or disagree.

If a new technology poses risks that are uncertain and not yet fully understood, the development of this technology should be stopped even if benefits are expected



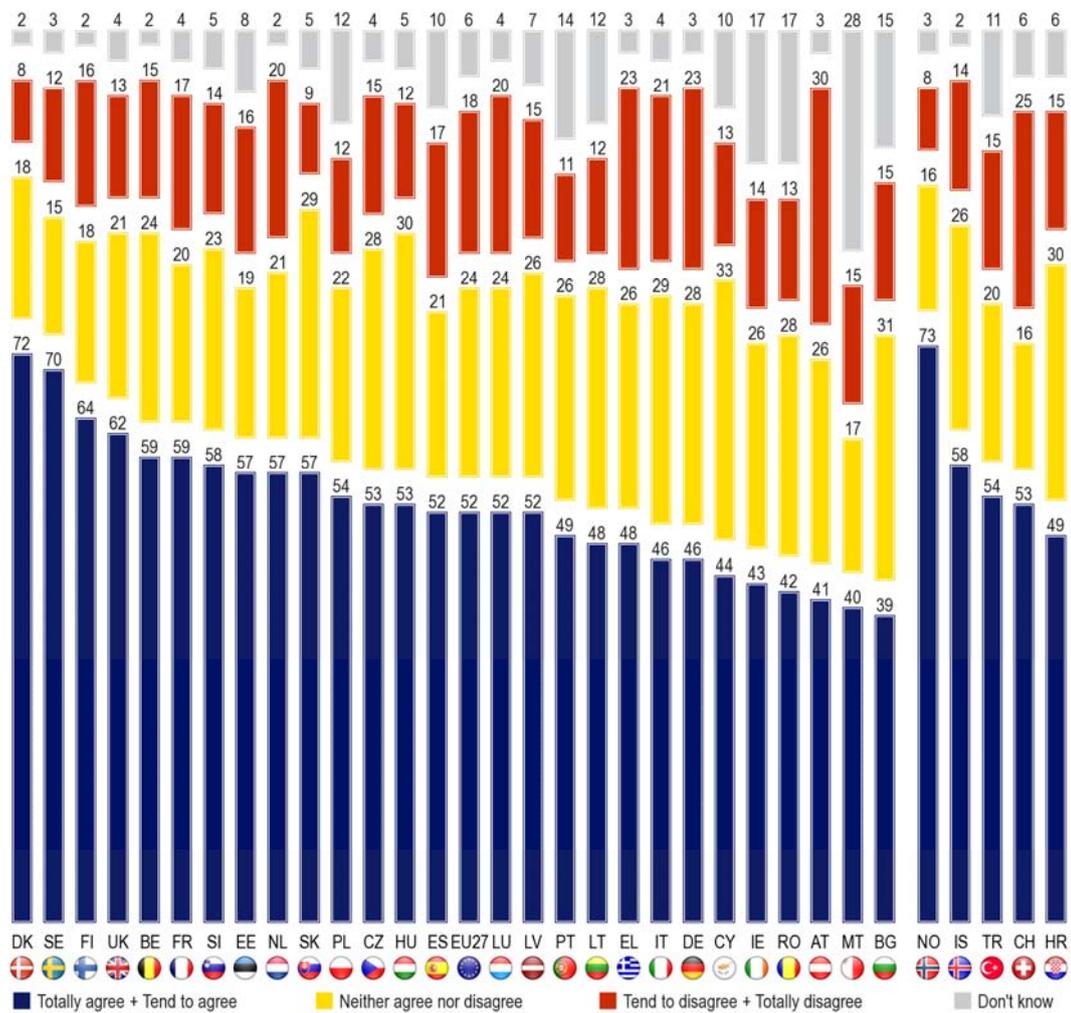
The figure above shows that when looking at country differences, agreement is highest in France with 66% of respondents and lowest in Iceland at 34%. Notably there are six countries where more than one third of respondents disagree that developments should be stopped if the risks are uncertain: the Netherlands at 42% of respondents, Norway at 40%, Finland at 39%, Iceland at 36%, Sweden at 35% and Switzerland at 33% .

When looking at the socio-demographic data, small differences between the social groups exist. Managers (32%) and those who left full-time education aged 20 or older (31%) are most likely to disagree.

- However, placing too much importance to risks may affect technological progress. –

While Europeans express the need for risk management, at the same time they do not want to miss out on technological progress. A slim majority of 52% of respondents at the EU27 level agree that technological progress will be slowed down if risks that are not yet fully understood receive too much importance⁴⁴.

QC7.8. I would like to read out some other statements. For each of them, please tell me how much you agree or disagree.
 If we attach too much importance to risks that are not yet fully understood, we could miss out on technological progress



⁴⁴ QC7.8 If we attach too much importance to risks that are not yet fully understood, we could miss out on technological progress.

The figure above shows at the country level, respondents in Norway agree the most at 73%, followed by Denmark (72%) and Sweden (70%). In the Scandinavian countries, respondents thus appear more willing to accept a risk for the potential beneficial returns. At the lower end, only 39% of respondents in Bulgaria agree and in Malta the level of agreement is similarly low at 40%.

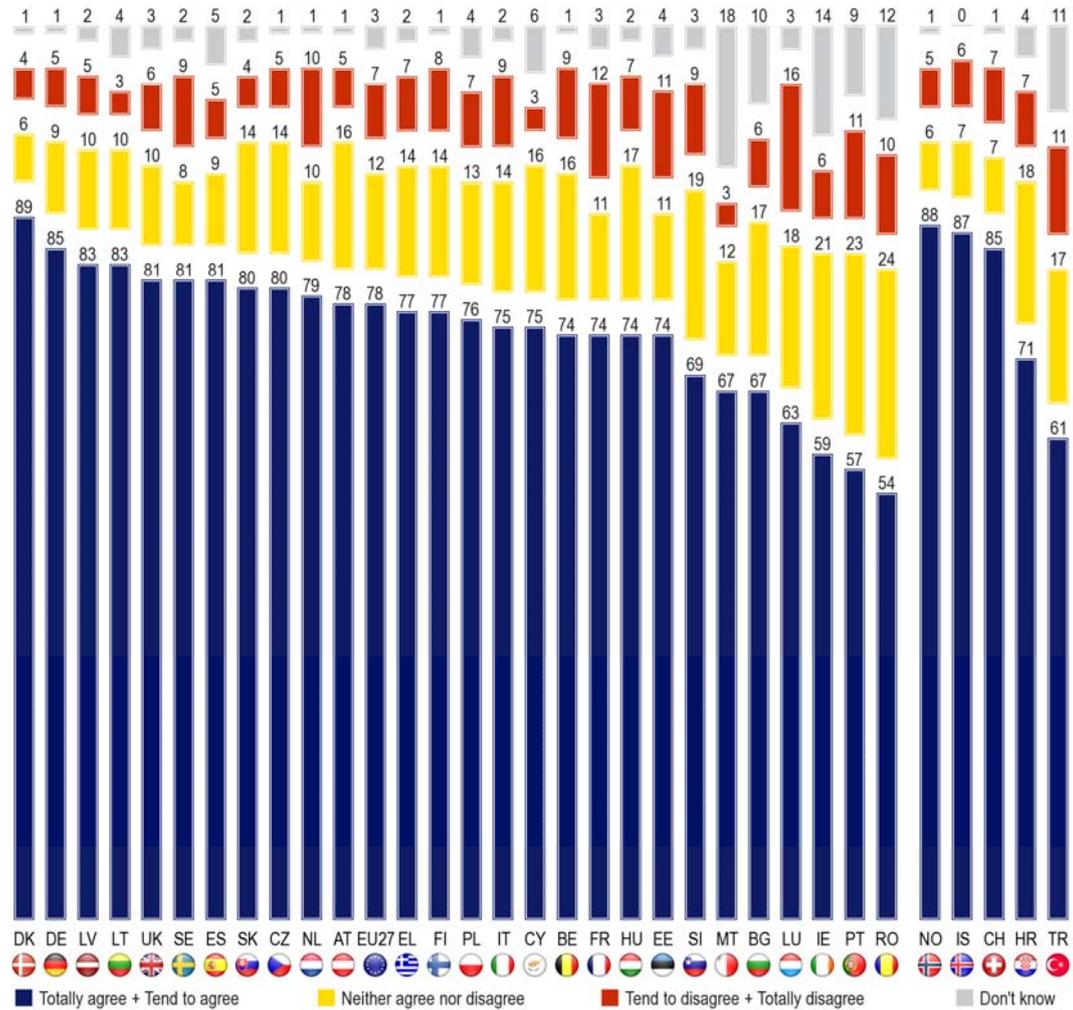
When we look at the socio-demographic data, again we see that people more interested in science are more likely to agree (63%) than the group that is not interested in science (39%). Similarly, for those well informed about scientific research, 67% of respondents agree while only 45% of respondents in the group that is not at all informed about science agree.

- Science is neither "good" nor "bad" it is how it is used which matters –

A broad majority of Europeans, 78% of respondents at the EU27 level, agree that a scientific discovery is in itself neither "good" nor "bad" but it is only the way the discovery is used which really matters⁴⁵.

⁴⁵ QC7.9 A scientific discovery is in itself neither "good" nor "bad"; it is only the way the discovery is used which matters.

QC7.9. I would like to read out some other statements. For each of them, please tell me how much you agree or disagree.
 A scientific discovery is in itself neither “good” nor “bad”; it is only the way the discovery is used which matters



The figure above shows that some countries strongly believe that this is so with Denmark the highest at 89% of respondents in agreement. The majority of countries have more than two thirds of respondents who agree. However, five countries are below this level with Luxembourg at 63% of respondents, Turkey at 61% of respondents, Ireland at 59% of respondents, Portugal at 57% of respondents and respondents in Romania at 54% the least in agreement.

Looking at the socio-demographic data, agreement is fairly consistent across the social groups apart from the familiar polarisation between those more interested in and informed about scientific developments. Of the respondents who are very interested in scientific discoveries 83% agree compared to 66% of those respondents who are not at all interested in scientific discoveries.

4. RESPONSIBILITIES OF SCIENTISTS AND POLICY MAKERS

In this chapter we examine how Europeans perceive the roles and responsibilities of scientists and policy makers and their responsibility towards society. We also look at which communicators of the science message are perceived as the most effective.

We look first at scientists and society and ask if scientists should inform the public about their work and whether Europeans think that scientists are effectively communicating their message to the rest of society. Secondly, we look at how European citizens are informed about science policy and direction. We compare scientists, policy makers, leading members of society, spiritual leaders and members of the mass media to obtain a picture of who Europeans think are most effective in getting across the message about science.

Results show that Europeans feel that decisions about science are best left to the scientific community itself. However, even though European citizens feel that senior scientists are the best qualified to convey the messages about science, this group is not considered as particularly efficient in doing so.

4.1 Scientists and society

4.1.1: *Public involvement*

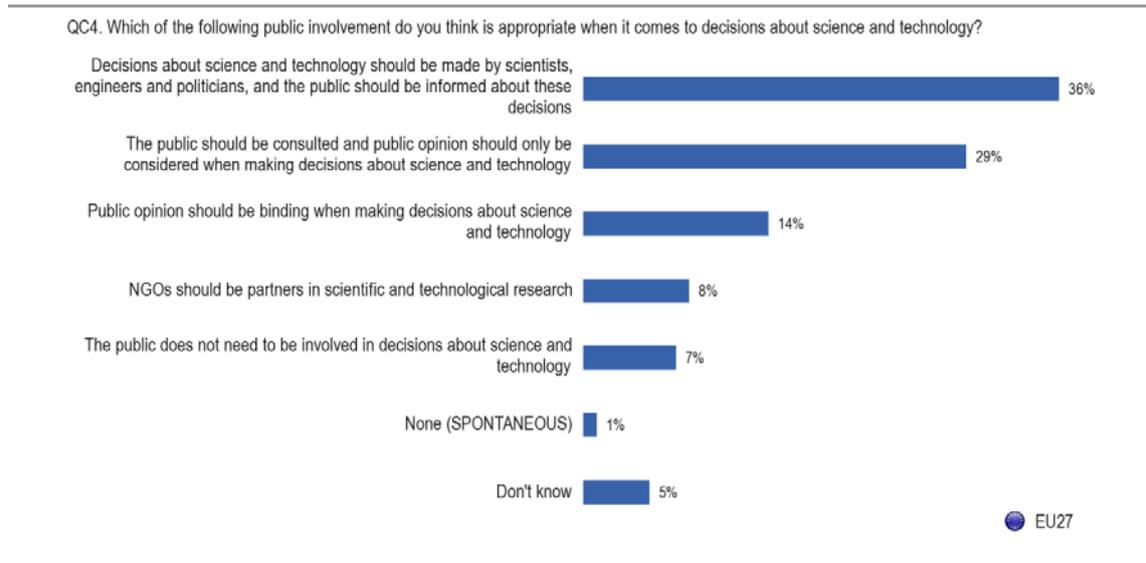
- The public should be informed and involved in decisions about science –

Respondents are asked to indicate their level of agreement to five statements about public involvement: the public does not need to be involved in decisions about science and technology; decisions about science and technology should be made by scientists, engineers and politicians, and the public should be informed about these decisions; the public should be consulted and public opinion should only be considered when making decisions about science and technology; public opinion should be binding when making decisions about science and technology; NGOs⁴⁶ should be partners in scientific and technological research⁴⁷.

⁴⁶ NGOs = Non Governmental Organisations

⁴⁷ QC4 Which of the following public involvement do you think is appropriate when it comes to decisions about science and technology?

The figure below shows that Europeans most feel that decisions about science and technology should be made by scientists, engineers and politicians, and the public should be informed about these decisions (36%) and secondly, that the public should be consulted and public opinion should only be considered when making decisions about science and technology (29%).



The table below shows that in some countries respondents are more in favour of the second statement: in Finland at 47%, Denmark at 45% and Germany at 43% respondents are more in favour of more consultations with the public about science issues. There are four countries where half or more respondents agree that decisions about science and technology should be made by scientists, engineers and politicians, and the public should be informed about these decisions, with Cyprus at 57% of respondents, Norway at 54% of respondents, Greece at 53% of respondents and Slovakia at 50% of respondents.

QC4 Which of the following public involvement do you think is appropriate when it comes to decisions about science and technology? (ROTATE)

	Decisions about science and technology should be made by scientists, engineers and politicians, and the public should be informed about these decisions	The public should be consulted and public opinion should only be considered when making decisions about science and technology	Public opinion should be binding when making decisions about science and technology	NGOs should be partners in scientific and technological research	The public does not need to be involved in decisions about science and technology	None (SPONTANEOUS)	DK
EU27	36%	29%	14%	8%	7%	1%	5%
BE	35%	31%	11%	7%	11%	4%	1%
BG	44%	23%	16%	3%	7%	-	7%
CZ	47%	19%	14%	9%	8%	1%	2%
DK	36%	45%	7%	6%	4%	-	2%
DE	29%	43%	10%	9%	5%	1%	3%
EE	43%	20%	16%	8%	7%	1%	5%
IE	43%	29%	9%	2%	7%	1%	9%
EL	53%	23%	16%	3%	4%	-	1%
ES	40%	19%	17%	9%	6%	2%	7%
FR	27%	36%	16%	9%	6%	1%	5%
IT	41%	19%	17%	8%	7%	3%	5%
CY	57%	23%	10%	2%	3%	-	5%
LV	45%	25%	12%	4%	8%	2%	4%
LT	39%	20%	21%	5%	7%	2%	6%
LU	37%	36%	12%	5%	7%	1%	2%
HU	43%	25%	18%	4%	7%	1%	2%
MT	42%	32%	8%	4%	6%	-	8%
NL	47%	35%	5%	6%	4%	1%	2%
AT	31%	34%	13%	12%	6%	1%	3%
PL	29%	24%	15%	9%	11%	1%	11%
PT	33%	20%	14%	9%	12%	2%	10%
RO	43%	19%	9%	3%	9%	2%	15%
SI	39%	24%	15%	9%	8%	2%	3%
SK	50%	14%	14%	11%	8%	-	3%
FI	32%	47%	6%	8%	6%	-	1%
SE	48%	31%	3%	10%	4%	1%	3%
UK	32%	32%	15%	7%	6%	1%	7%
HR	46%	23%	13%	5%	6%	1%	6%
TR	42%	23%	8%	4%	11%	2%	10%
IS	43%	27%	3%	15%	7%	3%	2%
NO	54%	26%	5%	7%	4%	1%	3%
CH	28%	39%	13%	8%	6%	3%	3%

* In bold, the highest results per country; in italics the lowest results per country; the grey rectangle shows the highest results per value; the rectangle with black borders shows the lowest results per value.

When we look at the socio-demographic data, we see little difference across the social groups although those who are more informed about science are more likely to wish that the public be consulted and public opinion be considered when making decisions. Here 33% of respondents in that group agree while only 26% of respondents of those who consider themselves to be poorly informed about science agree.

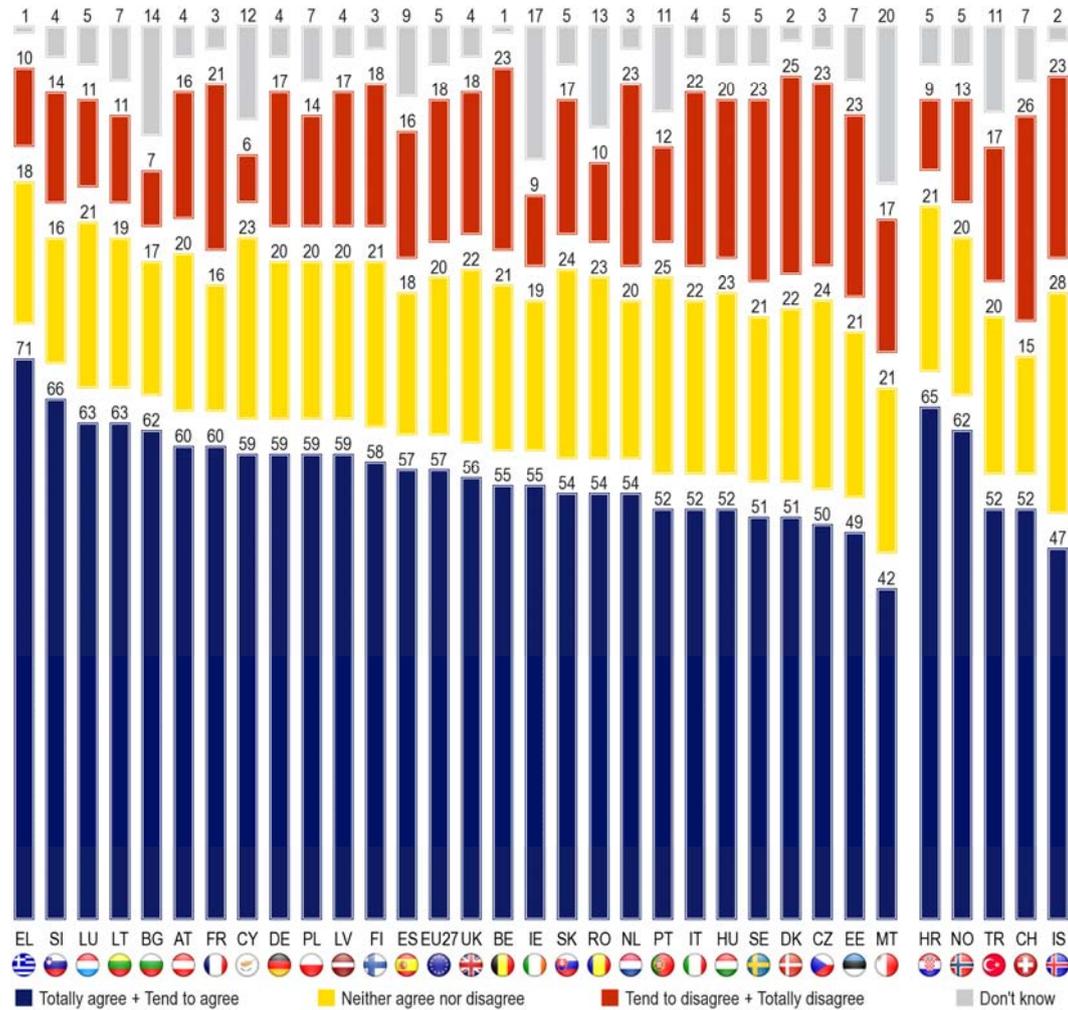
4.1.2: Scientists and informing the public

- More than half of Europeans feel that scientists do not put enough effort into informing the public –

A majority of European citizens agree that scientists do not put enough effort into informing the public about new developments in science and technology⁴⁸. The figure below shows that on average 57% of respondents agree while respondents in Greece at 71% express the most concerned and respondents in Malta at 42% appear least concerned and thus the most comfortable with the information about new scientific developments.

⁴⁸ QC7.11 Scientists do not put enough effort into informing the public about new developments in science and technology.

QC7.11. I would like to read out some other statements. For each of them, please tell me how much you agree or disagree.
 Scientists do not put enough effort into informing the public about new developments in science and technology



The figure above shows also that there are only three countries where less than 50% of respondents agree that scientists do not put enough effort into informing the public about new developments in science and technology with Estonia at 49% of respondents, Iceland at 47% of respondents and Malta at 42% of respondents.

When we look at the socio-demographic data we see, very markedly, that 58% of respondents who feel that they are not at all informed about science agree that scientists are not doing enough where as 54% of those who feel that they are very well informed about science agree. This suggests that those respondents who feel that they are not informed at all about science feel that scientists themselves are not making enough effort to communicate the message about science.

4.2 Policy-makers and science

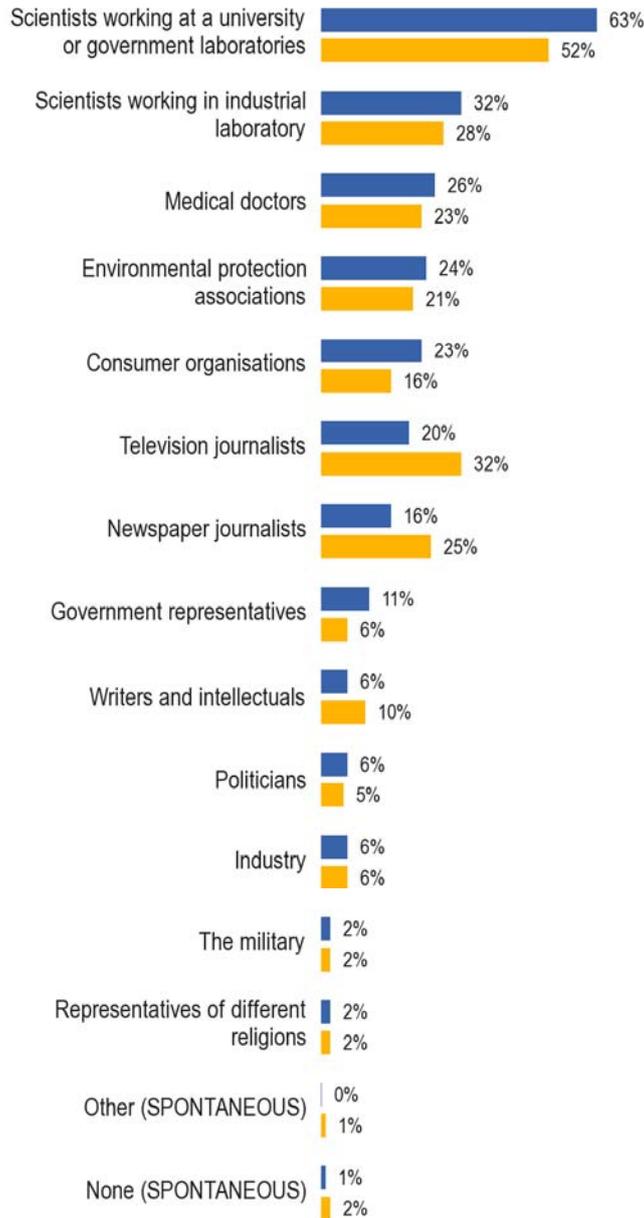
- Close to two out of three Europeans believe scientists are the best qualified to explain the impact of science –

The majority of European citizens - 63% of respondents at the EU27 average - agree that scientists working at a university or government laboratories are the best qualified to explain scientific and technological developments⁴⁹ as shown in the figure below. Scientists working in industrial laboratories are considered the next best at 32% of respondents at the EU27 level.

The figure below shows that the given importance of scientists working in universities or government laboratories has increased from 52% of respondents in 2005 at the EU25 level to 63% of respondents at the EU27 level in 2010. The perceived role of newspaper journalists has diminished from 25% in 2005 to 16% in 2010, television journalists likewise have a reduced role, declining from 32% in 2005 to 20% 2010, while the perceived quality of consumer organisations has increased from 16% in 2005 to 23% in 2010.

⁴⁹ QC5 Among the following categories of people and organisations working in (OUR COUNTRY), which are the best qualified to explain the impact of scientific and technological developments on society? (MAX. 3 ANSWERS).

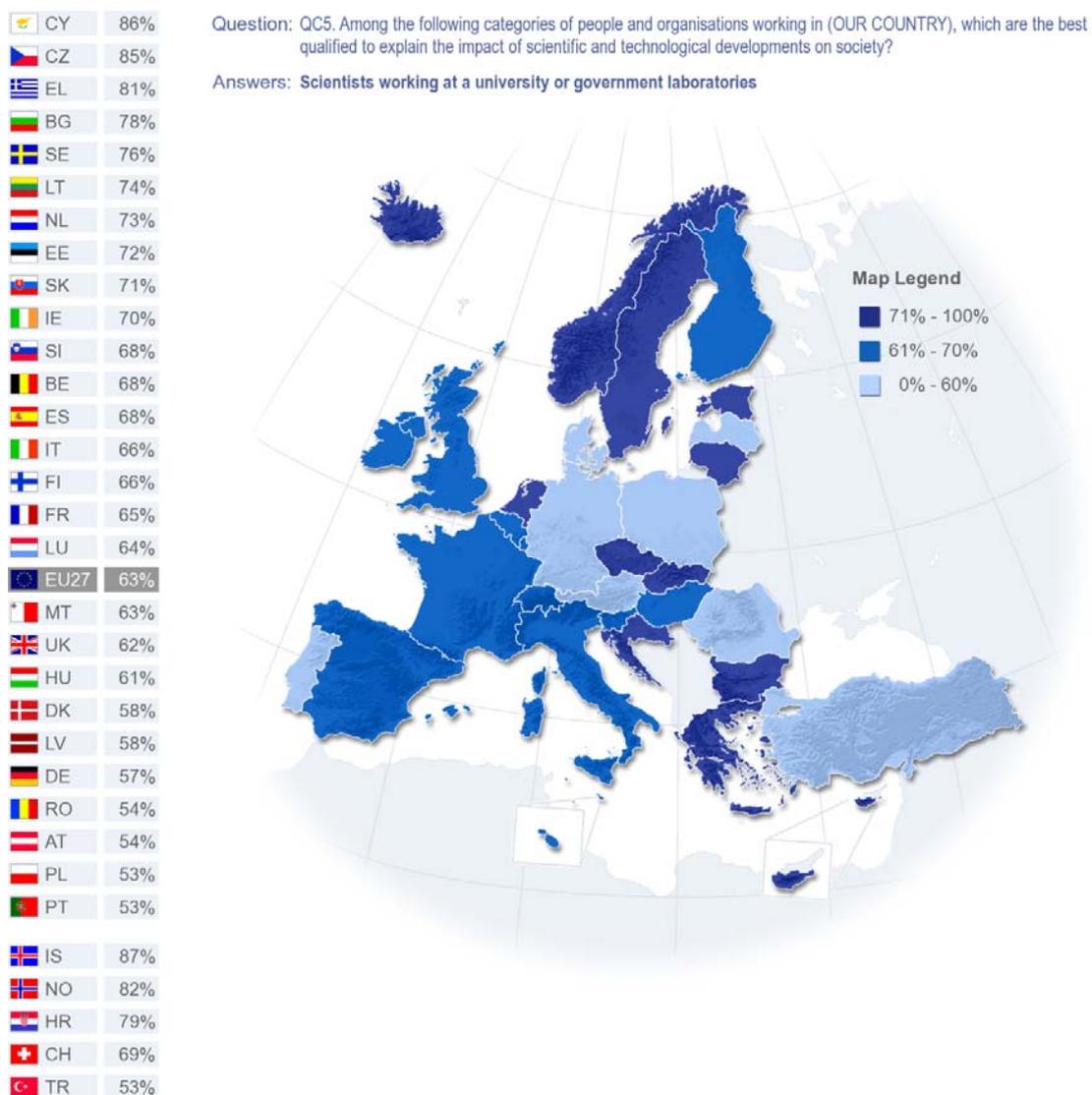
QC5. Among the following categories of people and organisations working in (OUR COUNTRY), which are the best qualified to explain the impact of scientific and technological developments on society?



■ EB73.1, 01-02/2010
 ■ EB63.1, 01-02/2005



The figure below shows that the distribution at country level of those that agree that scientists working at a university or government laboratory should explain the impact of science ranges from 87% of respondents in Iceland to 53% of respondents in Poland, Portugal and Turkey.



Notably, Romania with 38% of respondents, Latvia with 36% of respondents and Hungary with 33% of respondents attach a higher role to television journalists than other European countries.

QCS Among the following categories of people and organisations working in (OUR COUNTRY), which are the best qualified to explain the impact of scientific and technological developments on society? (MAX. 3 ANSWERS)

	Scientists working at a university or government laboratories	Scientists working in industrial laboratory	Medical doctors	Environmental protection associations	Consumer organisations	Television journalists	Newspaper journalists	Government representatives	Politicians	Industry	Writers and intellectuals	The military	Representatives of different religions
EU27	63%	32%	26%	24%	23%	20%	16%	11%	6%	6%	6%	2%	2%
BE	68%	36%	31%	17%	24%	18%	20%	14%	8%	8%	5%	2%	2%
BG	78%	49%	19%	26%	10%	17%	9%	14%	6%	8%	3%	3%	1%
CZ	85%	33%	28%	25%	12%	13%	12%	15%	6%	6%	3%	2%	1%
DK	58%	25%	29%	27%	35%	31%	19%	7%	17%	10%	7%	1%	0%
DE	57%	20%	26%	35%	44%	25%	17%	4%	7%	5%	6%	1%	3%
EE	72%	46%	23%	24%	8%	17%	13%	9%	6%	4%	7%	3%	1%
IE	70%	44%	29%	27%	17%	18%	17%	8%	7%	7%	5%	1%	3%
EL	81%	40%	36%	28%	18%	14%	9%	18%	8%	3%	5%	1%	3%
ES	68%	34%	24%	18%	13%	14%	11%	15%	10%	3%	2%	1%	1%
FR	65%	39%	29%	30%	31%	18%	17%	11%	5%	4%	8%	2%	1%
IT	66%	36%	24%	23%	21%	15%	13%	14%	7%	4%	3%	2%	5%
CY	86%	39%	40%	38%	26%	19%	9%	9%	4%	2%	5%	0%	3%
LV	58%	35%	21%	16%	7%	36%	24%	8%	5%	9%	5%	3%	2%
LT	74%	49%	16%	11%	6%	20%	18%	7%	6%	4%	5%	1%	2%
LU	64%	37%	20%	28%	18%	18%	24%	14%	12%	5%	5%	2%	3%
HU	61%	33%	32%	27%	23%	33%	14%	11%	7%	9%	7%	2%	2%
MT	63%	39%	40%	26%	11%	17%	14%	10%	9%	2%	6%	0%	1%
NL	73%	23%	21%	19%	41%	14%	29%	12%	7%	12%	16%	1%	1%
AT	54%	25%	31%	36%	37%	20%	21%	13%	6%	8%	5%	3%	5%
PL	53%	31%	14%	11%	10%	25%	19%	5%	4%	4%	5%	2%	1%
PT	53%	29%	23%	24%	14%	24%	17%	11%	6%	5%	2%	2%	3%
RO	54%	39%	21%	16%	12%	38%	22%	17%	6%	7%	3%	3%	2%
SI	68%	41%	18%	17%	14%	25%	20%	9%	5%	4%	8%	2%	1%
SK	71%	56%	17%	33%	6%	9%	13%	18%	7%	6%	3%	3%	3%
FI	66%	38%	23%	21%	25%	23%	26%	9%	7%	8%	8%	4%	2%
SE	76%	33%	24%	26%	24%	17%	21%	8%	8%	11%	13%	4%	1%
UK	62%	30%	32%	17%	12%	16%	14%	14%	3%	8%	11%	4%	2%
HR	79%	46%	24%	21%	3%	12%	11%	7%	5%	5%	5%	1%	1%
TR	53%	29%	24%	10%	7%	21%	17%	16%	12%	4%	10%	7%	6%
IS	87%	63%	24%	13%	11%	5%	8%	5%	1%	11%	12%	-	0%
NO	82%	40%	20%	27%	24%	8%	13%	13%	18%	7%	7%	2%	1%
CH	69%	32%	17%	29%	26%	12%	15%	13%	8%	7%	7%	2%	2%

* In bold, the highest results per country; in italics the lowest results per country; the grey rectangle shows the highest results per value; the rectangle with black borders shows the lowest results per value.

When we look at the socio-demographic data, again for those who feel very interested in science 70% of respondents agree that scientists working in universities or government laboratories are the best qualified to explain science while only 53% of those respondents that feel that they are not informed agree. Managers at 71% of respondents are the most likely to agree.

Those respondents who are very interested in and informed about science feel more strongly about all sources of information than those who are not interested and not informed. Only when we look at television journalists do we see that those not at all informed by science see this source as better where 22% of respondents agree, compared to 17% of respondents who are very well informed about science.

5. SCIENTIFIC STUDIES AND THE ROLE OF YOUNG PEOPLE AND WOMEN IN SCIENCE

In this chapter we investigate the level of understanding of Europeans of the role of young people and women in science. The role of government, the effect of science on young people and the role of women in scientific research are studied.

We first investigate whether Europeans feel that governments are doing enough to stimulate young people to be involved with science. We ask if involvement in science improves the employment prospects of young people, whether science improves culture and whether young people who are involved with science are better prepared for future life. Secondly, we look at whether Europeans feel that governments are doing enough to encourage women to be involved with science, and whether more women in science would improve science in general.

Results suggest that Europeans have a positive view of the effect of involvement with science on young people but feel that governments are not doing enough to stimulate wide interest. More efforts by governments to stimulate women to be involved with science is seen as necessary and would, if successful, have a positive effect on development of the sciences in Europe.

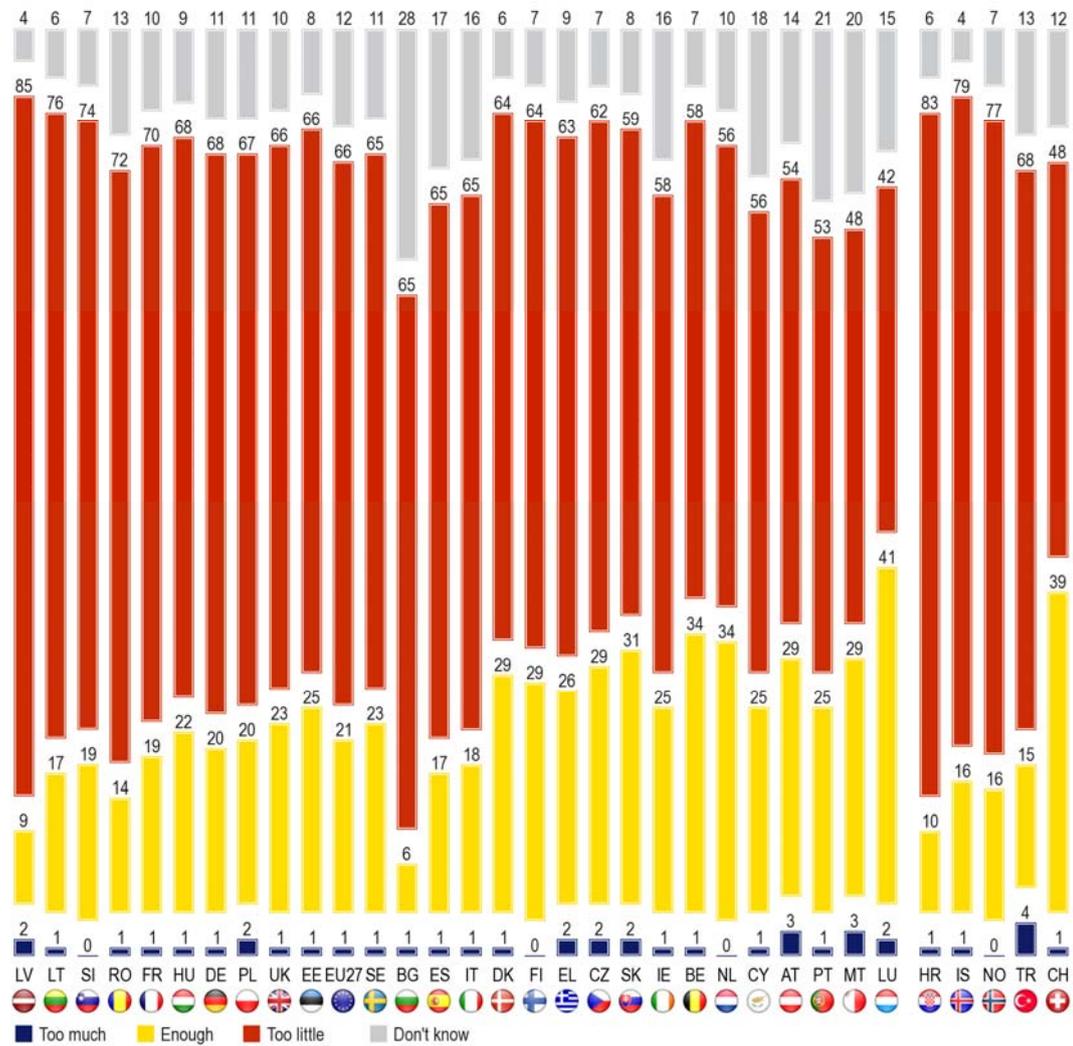
5.1 The importance of young people and scientific studies

- Governments do too little to interest young people in science –

A majority of Europeans, 66% of respondents at the EU27 level, think that Government is doing **too little** to stimulate young people's interest in science⁵⁰. The figure below shows that at the country level, respondents in Latvia and Croatia are the least satisfied with Governments efforts with over 8 out of 10 respondents stating that too little is done (85% and 83%, respectively).

⁵⁰ QC14 In your opinion, is the (NATIONALITY) Government doing too much, enough or too little to stimulate young people's interest in science?

QC14. In your opinion, is the (NATIONALITY) Government doing too much, enough or too little to stimulate young people's interest in science?

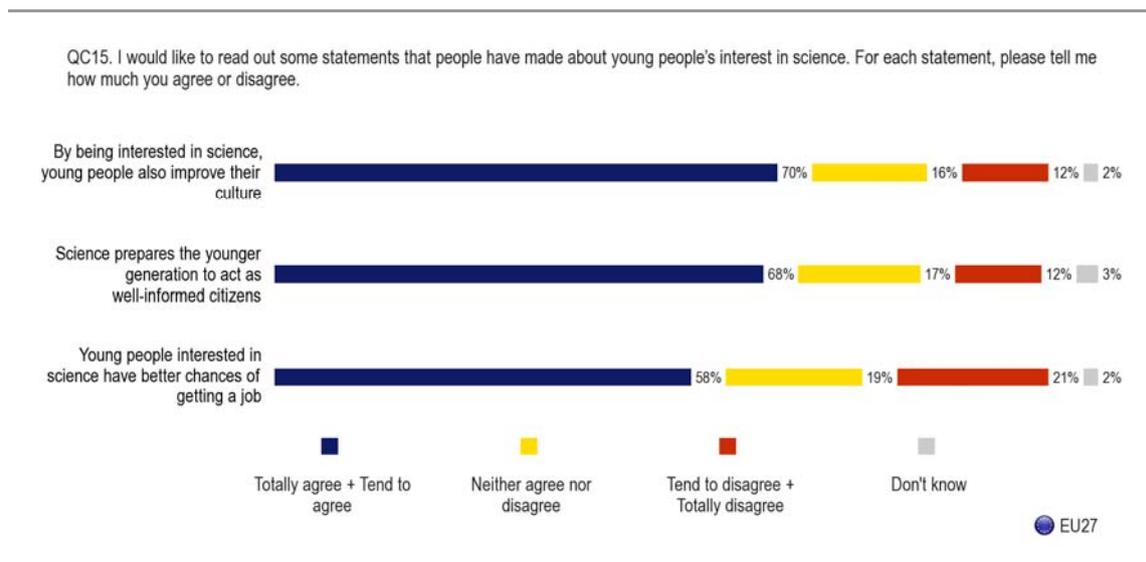


The view that governments are doing too much is largely absent with no more than one or two percent of respondents in each country expressing this view. The EU27 average for respondents who think that governments are doing enough to interest young people in science is 21% of respondents and only three countries have more than one third of respondents who agree with Luxembourg at 41% of respondents, Switzerland at 39% of respondents and Belgium at 34% of respondents.

When we look at the socio-demographic data, most of the social groups are around the 66% of the EU27 average who think that governments do too little, however, for those who are very interested in science 73% of respondents think that governments are doing too little, while those who are not interested in science are less critical but still 55% of respondents in this category think that governments do too little to encourage young people in science.

- Young people interested in science have better chances of a job –

A majority of 58% of Europeans at the EU27 level agree that young people interested in science have a better chance of getting a job⁵¹. The figure below shows that a larger proportion 68% of respondents agree that science prepares the younger generation to act as well-informed citizens⁵² and 70% of respondents agree that by being interested in science, young people also improve their culture⁵³.



The figure below shows that opinion varies between countries with respondents in Finland, Sweden, Norway and Germany (73% each) most in agreement that young people interested in science have better chances of getting a job. Agreement levels are lowest in France (41%).

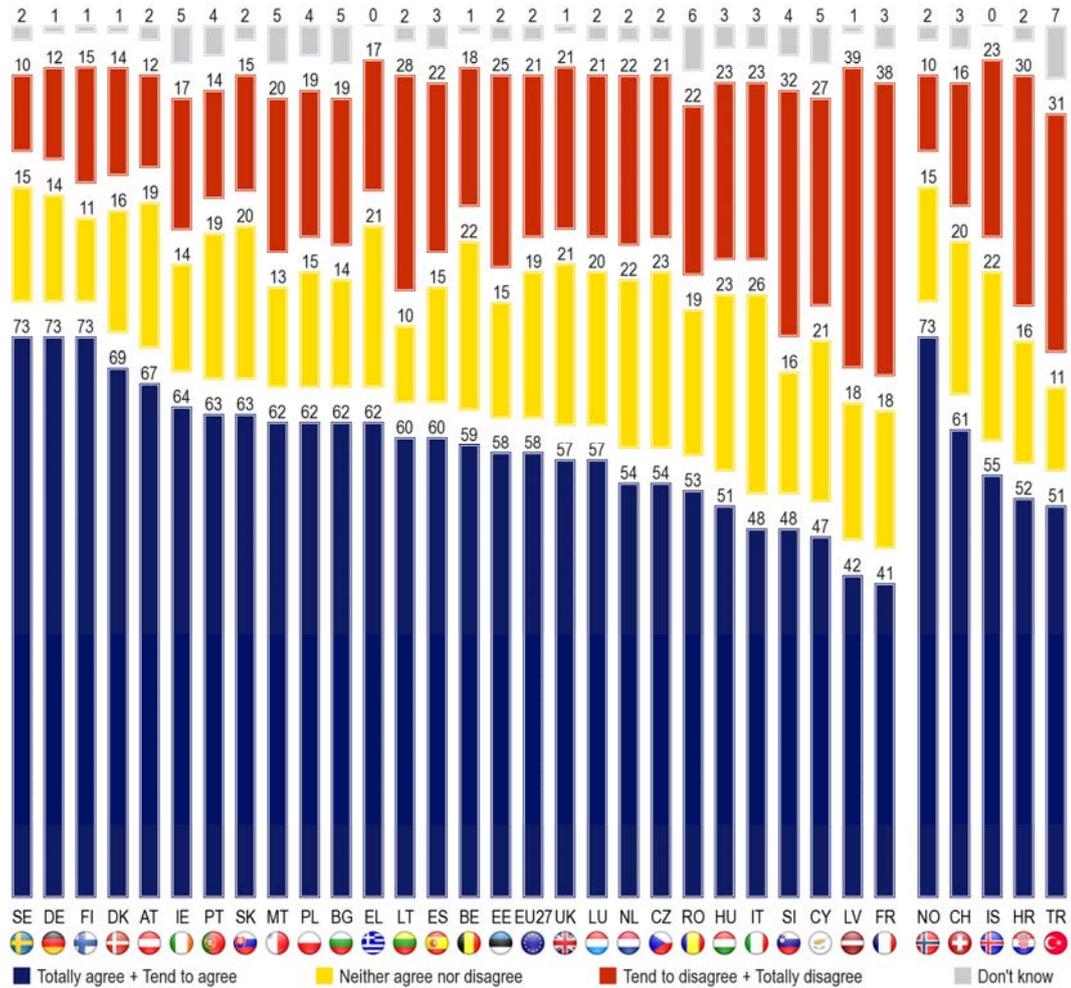
⁵¹ QC15.1 Young people interested in science have better chances of getting a job.

⁵² QC15.3 Science prepares the younger generation to act as well-informed citizens.

⁵³ QC15.2 By being interested in science, young people also improve their culture.

QC15.1. I would like to read out some statements that people have made about young people's interest in science. For each statement, please tell me how much you agree or disagree.

Young people interested in science have better chances of getting a job



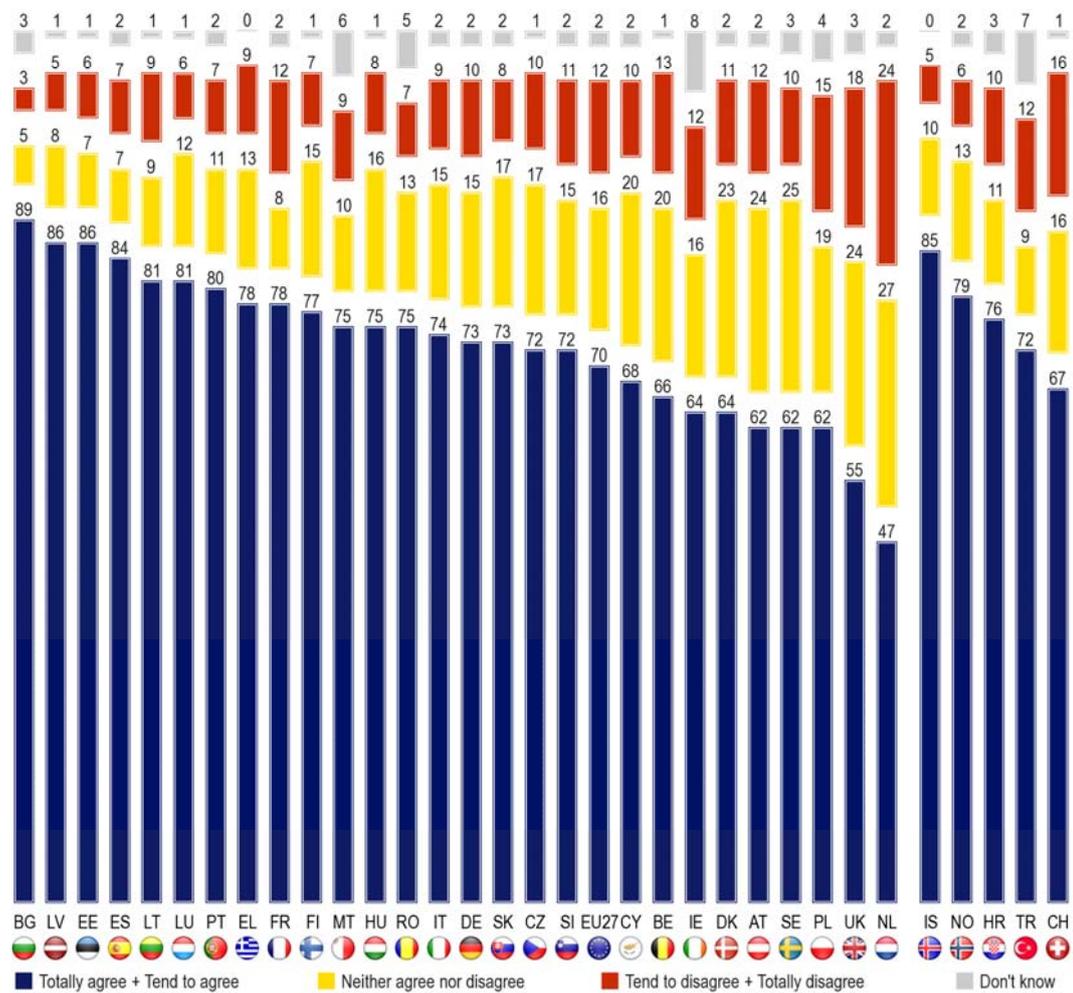
When we look at the socio-demographic data, we see little variation around the 58% of respondents at the EU27 level who agree. However, those who are very interested in science agree at 61% of respondents while among those who are not at all interested in science only 51% of respondents agree.

- Being interested in science improves culture for young people –

A high majority of Europeans, 70% at the EU27 level, agree that by being interested in science, young people also improve their culture⁵⁴. The figure below shows that Bulgaria at 89% of respondents, Estonia and Latvia, both at 86% of respondents, are the most in agreement that involvement in science has a positive effect on culture.

QC15.2. I would like to read out some statements that people have made about young people’s interest in science. For each statement, please tell me how much you agree or disagree.

By being interested in science, young people also improve their culture



⁵⁴ QC15.2 By being interested in science, young people also improve their culture.

Looking at the socio-demographic data, we see little variation around the 70% of respondents at the EU27 level who agree. However, those who are interested in science agree at 75% while those who are not interested in science agree at 62% of respondents. People who are 55 or older tend to agree far more often than those between 15 to 24 years of age (75% vs. 66%).

QC15.2 I would like to read out some statements that people have made about young people's interest in science. For each statement, please tell me how much you agree or disagree.

By being interested in science, young people also improve their culture

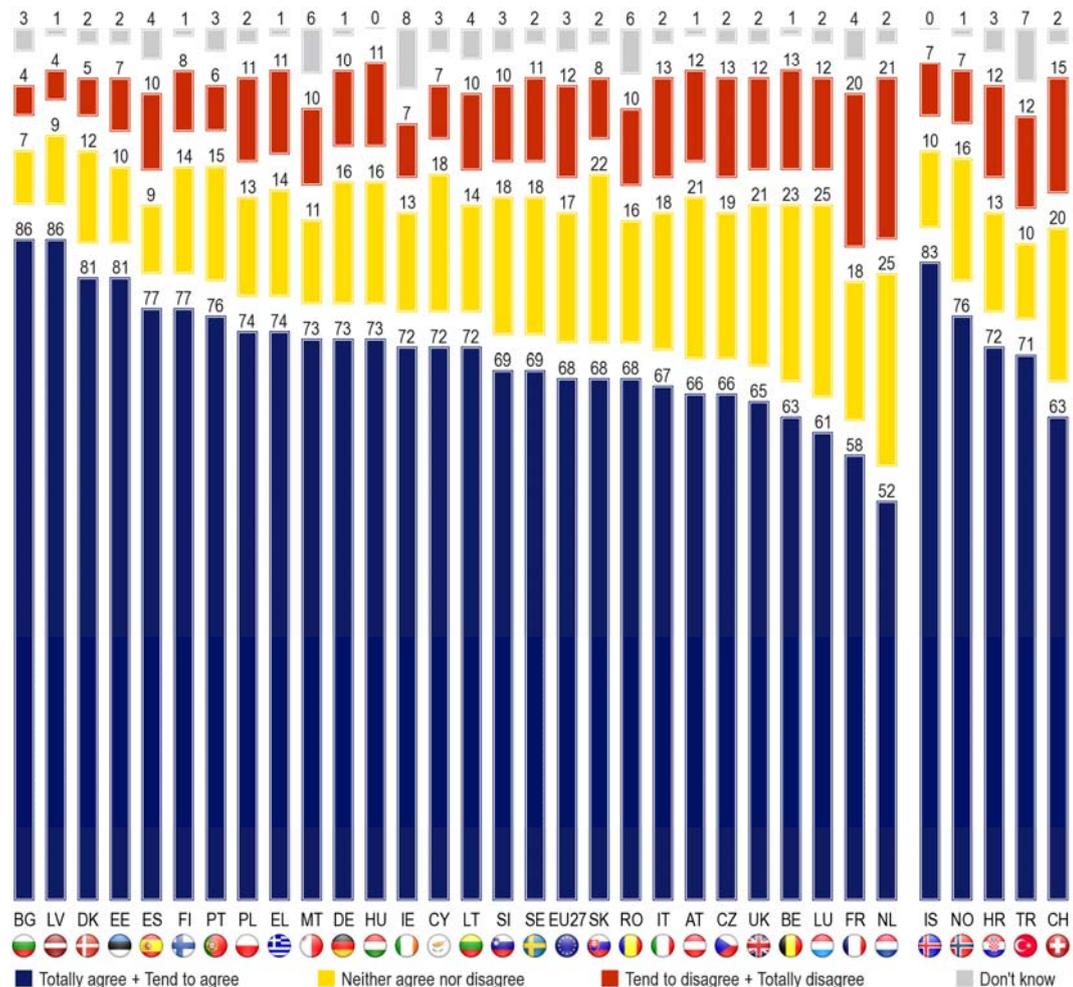
	Total agree	Neither agree nor disagree	Total disagree	DK
EU27	70%	16%	12%	2%
Sex				
 Male	71%	15%	12%	2%
Female	70%	16%	11%	3%
Age				
 15-24	66%	17%	15%	2%
25-39	69%	17%	13%	1%
40-54	69%	17%	12%	2%
55 +	75%	13%	9%	3%
Education (End of)				
 15-	73%	14%	10%	3%
16-19	70%	17%	11%	2%
20+	72%	15%	12%	1%
Still studying	68%	15%	15%	2%
Respondent occupation scale				
 Self-employed	72%	16%	11%	1%
Managers	69%	17%	13%	1%
Other white collars	71%	18%	9%	2%
Manual workers	68%	18%	12%	2%
House persons	71%	15%	12%	2%
Unemployed	69%	16%	13%	2%
Retired	74%	13%	9%	4%
Students	68%	15%	15%	2%
Interested in scientific discoveries				
Yes, very	75%	13%	11%	1%
Yes, moderately	72%	16%	10%	2%
No	62%	18%	15%	5%

- Science helps prepare the younger generations –

The majority of Europeans, 68% of respondents at the EU27 level, agree that science prepares the younger generation to act as well-informed citizens⁵⁵. At the country level, the figure below shows that respondents in Bulgaria and Latvia, both at 86%, are the most in agreement. Disagreement is low for all countries, being 12% of respondents at the EU27 level. Respondents in France (20%) and the Netherlands (21%) disagree far more often compared to those in Latvia and Bulgaria, where only 4% of respondents disagree.

QC15.3. I would like to read out some statements that people have made about young people's interest in science. For each statement, please tell me how much you agree or disagree.

Science prepares the younger generation to act as well-informed citizens



⁵⁵ QC15.3 Science prepares the younger generation to act as well-informed citizens.

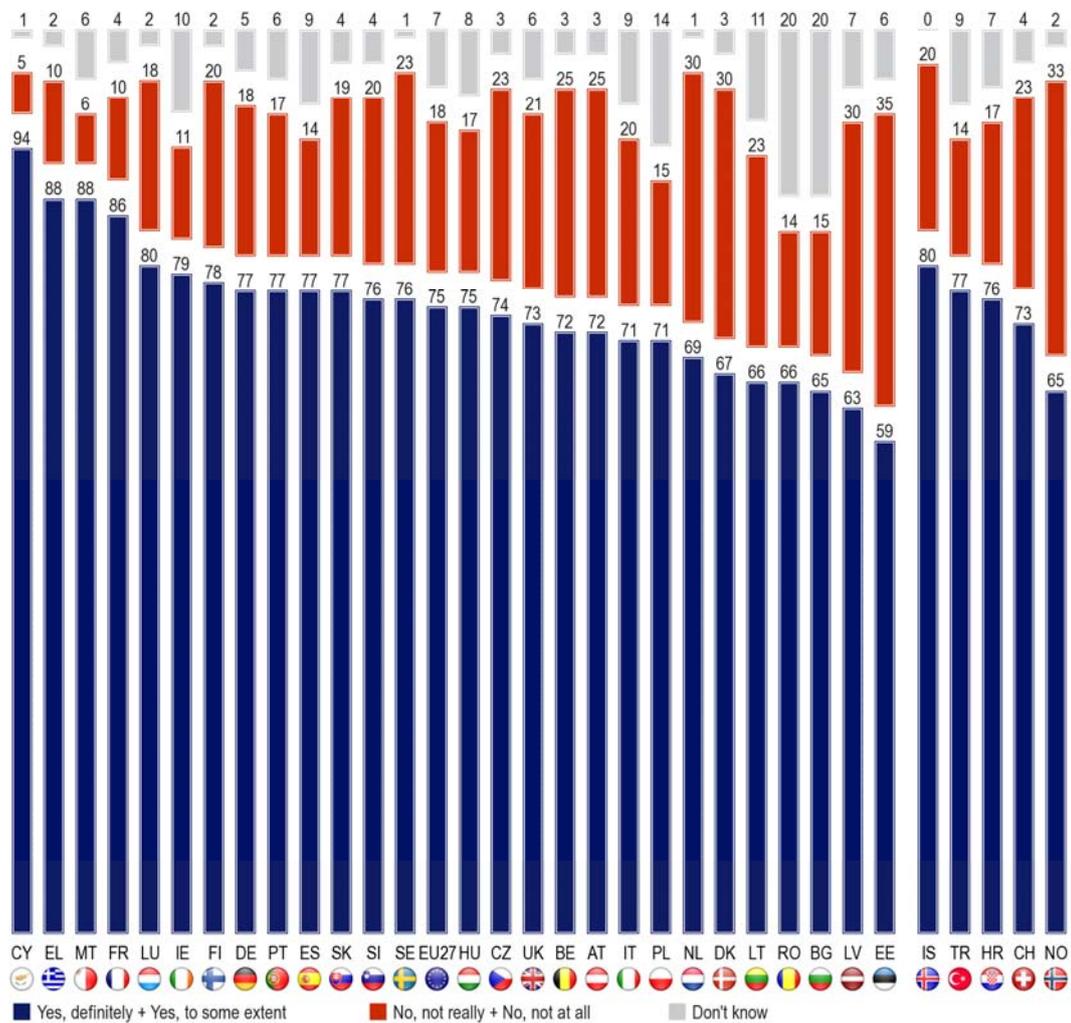
When we look at the socio-demographic data, there is little variation around the 68% at the EU27 level who agree. However, those who are very interested in science agree at 73% of respondents while those respondents who are not at all interested in science agree at 61% of respondents.

5.2 Women and the field of scientific research

- Governments should support measures to improve women's representation –

The majority of Europeans, 75% of respondents at the EU27 level, agree that women are underrepresented in top positions in research institutions and that Government should support specific measures to improve women's representation in the scientific professions⁵⁶.

QC16. Women are underrepresented in top positions in research institutions. Do you think that the (NATIONALITY) Government should support specific measures to improve women's representation in the scientific professions?



⁵⁶ QC16 Women are underrepresented in top positions in research institutions. Do you think that the (YOUR NATIONALITY) Government should support specific measures to improve women's representation in the scientific professions?

The figure above shows the country results. Respondents in Cyprus (94%), Greece and Malta (88% each) and France (86%) are most in agreement. In no country are respondents strongly against this idea. At 59%, agreement is lowest in Estonia which still represents an outright majority in favour that Government should do more to improve women's representation.

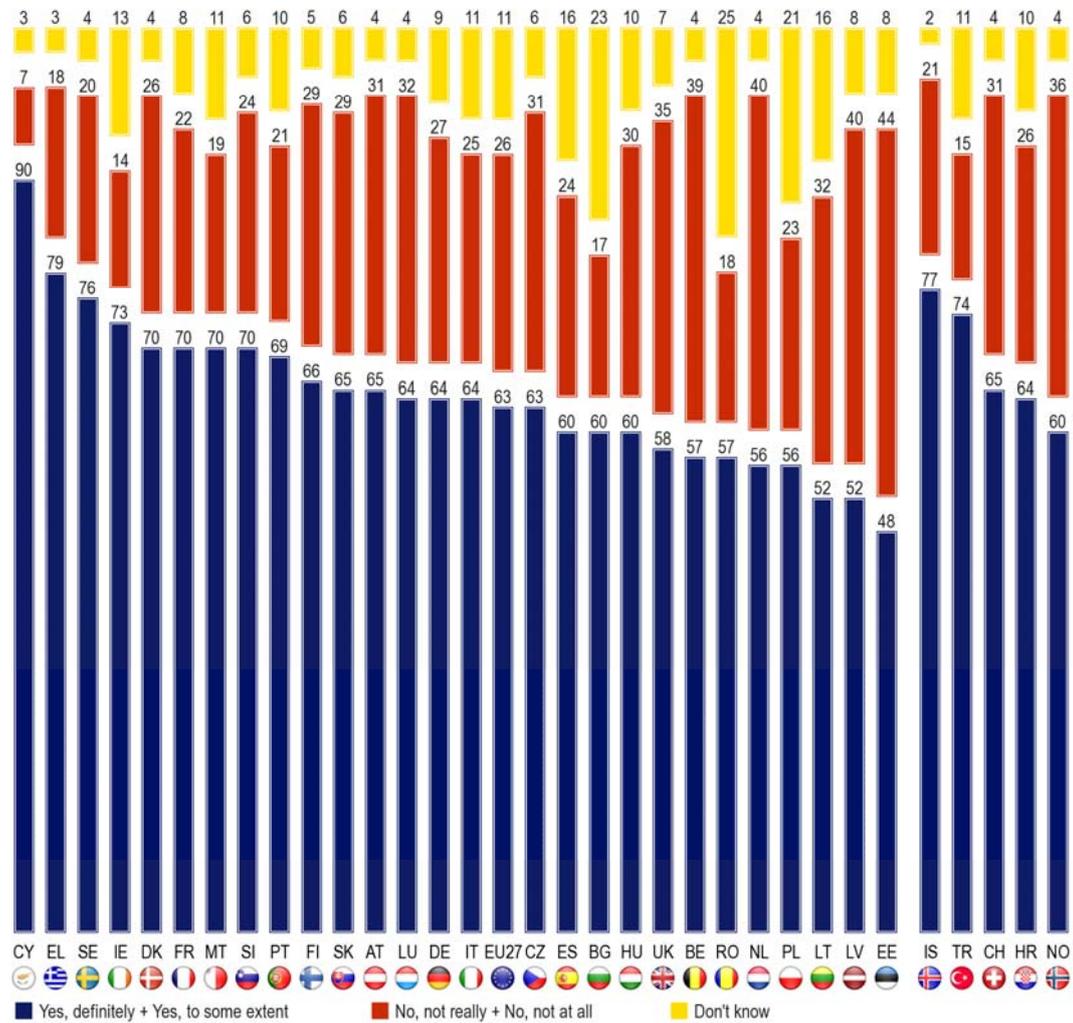
When we look at the socio-demographic data, we again see little variation around the 75% of respondents at the EU27 level who agree. However, one major exception is that even though 70% of men agree, 80% of women agree with this statement. In addition, those who are interested in science are even more likely to agree with 78%, while 69% of those who are not at all interested in science agree.

- More women in top functions would improve research –

The majority of Europeans, 63% of respondents at the EU27 level, think that it is true that if women were more represented in top positions in research institutions, there would be an improvement in the way research is currently conducted⁵⁷.

⁵⁷ QC17 If women were more represented in top positions in research institutions, do you think that it would improve the way research is currently conducted.

QC17. If women were more represented in top positions in research institutions, do you think that it would improve the way research is currently conducted?



The figure above shows that respondents in Cyprus (90%) and Greece (79%) are the most in agreement. Estonia at 48% of respondents in agreement, and Lithuania and Latvia with both at 52% of respondents in agreement have the lowest belief that more women in top functions would improve scientific development.

There is little variation in the socio-demographic data. However, not surprisingly perhaps, women are more likely to agree than men (69% vs. 56%).

Although there is no corresponding question in the survey of 2005, in the report of 2005⁵⁸ it is stated that there had been a drop in the number of students in scientific disciplines in recent years throughout Europe, and there is a general lack of integration of women in the scientific field. The findings in this report tend to emphasise that women are still seen as underrepresented in the world of science and not enough is done to improve on this situation.

⁵⁸ Special Eurobarometer 224 "Europeans, Science & Technology" (2005).

6. EFFECTIVENESS OF EUROPEAN SCIENTIFIC RESEARCH

In this chapter we investigate the effectiveness of scientific research issues specific to the European Union, the level of investment, the level of collaboration within the EU and the interests that this serves, and whether collaboration with countries outside the EU would be beneficial.

We first investigate the views Europeans have on investment in science and whether this should be increased. Secondly, we look at collaboration between different EU Member States and then collaboration between the EU and other countries in the field of science. Finally, we ask Europeans for their views on which options are best to pursue the development world class scientific research and technological development in the EU, including furthering collaboration between academic research and industry and private companies and whether new European research centres would be beneficial.

Results suggest that the perception of Europeans of the current level of investment in scientific research at the EU level is not clear. However, an increase in the level of investments is considered as beneficial. On collaboration and expansion in the future, Europeans more strongly feel that this would be beneficial.

6.1 Issues regarding scientific research in Europe

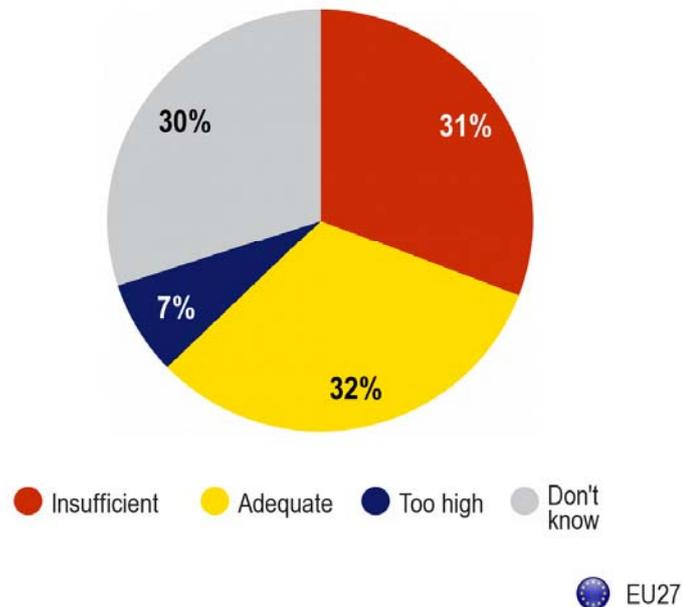
6.1.1: Research investments made by the EU

- EU citizens don't have a clear view on level of EU research investments –

Europeans as a whole do not appear to have a clear view with 31% of respondents at the EU27 level replying that EU investment in research is insufficient, 32% finding it to be adequate, and a high of 30% lacking an opinion⁵⁹. What the survey does clearly show is that Europeans do not consider investment made by the European Union in research as being too high, with only 7% of respondents at the EU27 level believing this to be the case.

⁵⁹ QC10 According to what you know, would you say that the investments made by the European Union in research are insufficient, adequate or too high?

QC10. According to what you know, would you say that the investments made by the European Union in research are insufficient, adequate or too high?



The table below shows that in thirteen countries the most popular view is that investments in research made by the European Union are adequate. It is the view of more than half of respondents in Slovakia (56%), Slovenia (52%) and Austria (51%). Turkey is the only country where more than half of the respondents think that investment is insufficient (53%), with next highest proportions noted in Latvia (46%) and Croatia (41%). It is also the most popular response in Spain, France, Sweden (39% each) and Italy (36%). Finally, the figure shows that there are seven countries where a lack of opinion dominates, with Bulgarian respondents most often answering "don't know" (56%), followed by those in Norway (44%), Cyprus (42%) and Switzerland (41%).

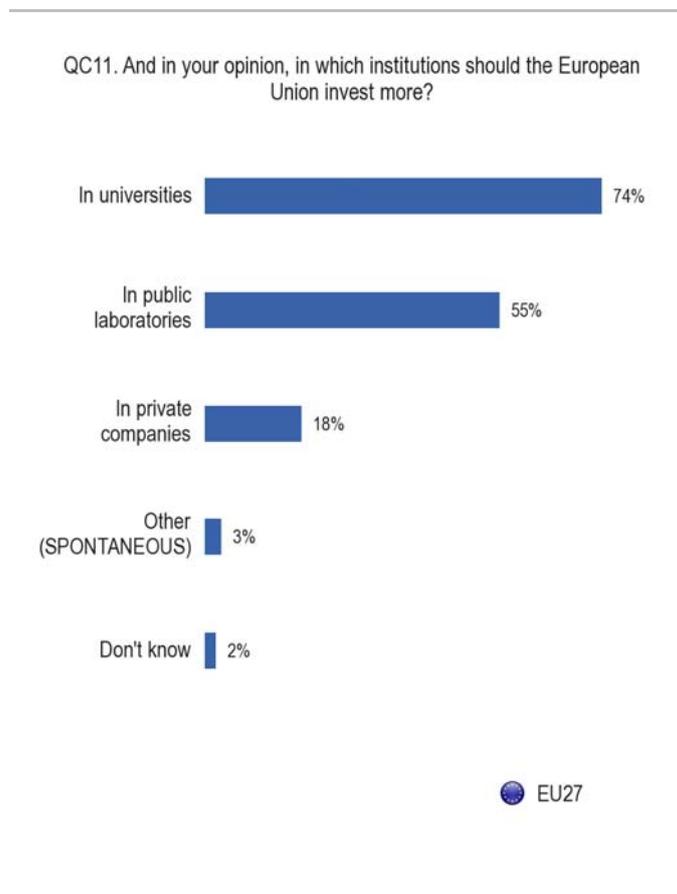
QC10 According to what you know, would you say that the investments made by the European Union in research are insufficient, adequate or too high?

		Insufficient	Adequate	Too high	DK
 EU27		31%	32%	7%	30%
 BE		38%	43%	8%	11%
 BG		27%	15%	2%	56%
 CZ		25%	48%	7%	20%
 DK		30%	41%	3%	26%
 DE		27%	32%	8%	33%
 EE		27%	39%	3%	31%
 IE		22%	36%	5%	37%
 EL		35%	39%	6%	20%
 ES		39%	24%	5%	32%
 FR		39%	22%	9%	30%
 IT		36%	30%	9%	25%
 CY		24%	31%	3%	42%
 LV		46%	32%	4%	18%
 LT		33%	32%	5%	30%
 LU		29%	48%	5%	18%
 HU		26%	43%	7%	24%
 MT		30%	28%	6%	36%
 NL		24%	41%	7%	28%
 AT		22%	51%	7%	20%
 PL		31%	34%	4%	31%
 PT		29%	31%	7%	33%
 RO		33%	28%	3%	36%
 SI		21%	52%	7%	20%
 SK		20%	56%	8%	16%
 FI		20%	47%	9%	24%
 SE		39%	30%	3%	28%
 UK		23%	34%	6%	37%
 HR		41%	31%	5%	23%
 TR		53%	19%	3%	25%
 IS		25%	35%	5%	35%
 NO		30%	24%	2%	44%
 CH		16%	33%	10%	41%

* In bold, the highest results per country; in italics the lowest results per country; the grey rectangle shows the highest results per value; the rectangle with black borders shows the lowest results per value.

- Three in four Europeans find that the EU should invest more in universities -

When asked in which institutions the European Union should invest more, respondents most often selected universities (74%). The figure below also shows that public laboratories (55%) are also widely favoured but that this is not so for private companies where only 18% of respondents feel that this is an appropriate route for investment by the European Union⁶⁰.



⁶⁰ QC11 And in your opinion, in which institutions should the European Union invest more? (MULTIPLE ANSWERS POSSIBLE).

The view that the EU should invest more in universities prevails in all countries except the Czech Republic, where public laboratories are selected more often (73% vs. 66%) and Hungary where universities and public laboratories are equally popular. Support for more investment in universities ranges from 94% in Cyprus and 93% in Germany to 57% in Hungary. Support for more funding for public laboratories ranges from 73% in the Czech Republic and 71% in Spain to 23% in Turkey. Finally, support for more funding in private companies is highest in Slovenia (42%) and Cyprus (39%) and below ten percent in Greece (8%) and Slovakia (9%).

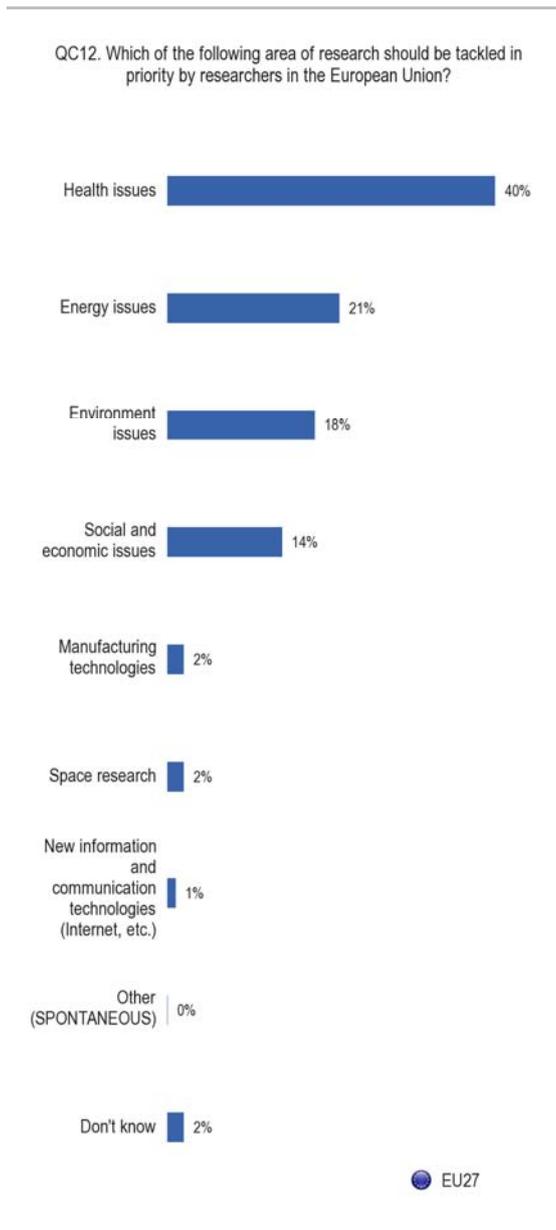
QC11 And in your opinion, in which institutions should the European Union invest more? (MULTIPLE ANSWERS POSSIBLE)
(IF 'INSUFFICIENT', CODE 1 IN QC10)

	In universities	In public laboratories	In private companies	Other (SPONTANEOUS)	DK
EU27	74%	55%	18%	3%	2%
BE	71%	55%	<i>28%</i>	4%	1%
BG	73%	64%	<i>21%</i>	-	3%
CZ	66%	73%	<i>16%</i>	2%	0%
DK	87%	68%	33%	1%	2%
DE	93%	42%	<i>16%</i>	4%	2%
EE	79%	65%	<i>26%</i>	3%	1%
IE	79%	45%	<i>21%</i>	5%	2%
EL	82%	52%	<i>8%</i>	0%	1%
ES	77%	71%	<i>18%</i>	3%	1%
FR	65%	62%	<i>20%</i>	2%	1%
IT	72%	62%	<i>20%</i>	3%	1%
CY	94%	68%	39%	2%	-
LV	78%	<i>33%</i>	<i>20%</i>	0%	1%
LT	69%	53%	<i>17%</i>	2%	2%
LU	72%	50%	<i>28%</i>	3%	3%
HU	<i>57%</i>	56%	<i>22%</i>	1%	2%
MT	73%	41%	<i>26%</i>	3%	2%
NL	82%	38%	<i>14%</i>	1%	1%
AT	77%	59%	<i>29%</i>	5%	2%
PL	68%	51%	<i>18%</i>	1%	3%
PT	80%	66%	<i>20%</i>	1%	1%
RO	63%	42%	<i>24%</i>	10%	7%
SI	72%	63%	42%	6%	0%
SK	64%	58%	<i>9%</i>	1%	1%
FI	67%	45%	<i>18%</i>	2%	1%
SE	84%	45%	<i>25%</i>	2%	1%
UK	71%	44%	<i>11%</i>	2%	3%
HR	<i>65%</i>	41%	<i>18%</i>	3%	2%
TR	69%	<i>23%</i>	<i>15%</i>	3%	6%
IS	79%	51%	<i>19%</i>	1%	1%
NO	82%	49%	<i>20%</i>	3%	2%
CH	81%	45%	27%	1%	1%

* In bold, the highest results per country; in italics the lowest results per country; the grey rectangle shows the highest results per value; the rectangle with black borders shows the lowest results per value.

- Health issues are the highest research priority –

When asked which area of research should be tackled in priority by researchers in the European Union, respondents most often mention health issues (40%), with energy issues at 21% and environment issues at 18% following⁶¹.



⁶¹ QC12 Which of the following area of research should be tackled in priority by researchers in the European Union?

The table below reveals that priorities differ in the countries under investigation. If in the majority of countries health is seen as the research priority, country opinions vary from 65% in Cyprus to 16% in Sweden. Here, the most popular view is that environment issues should be the highest priority (41%) and this is also the case in Norway and Switzerland (34% each). In Finland, votes for social and economic issues (27%) slightly outnumber support for priority research on environment issues (25%) or health issues (24%).

In Germany, energy is viewed as the highest priority (30%) over health and in Sweden (27%) and Switzerland (25%) energy is also named more frequently than health.

QC12 Which of the following area of research should be tackled in priority by researchers in the European Union?

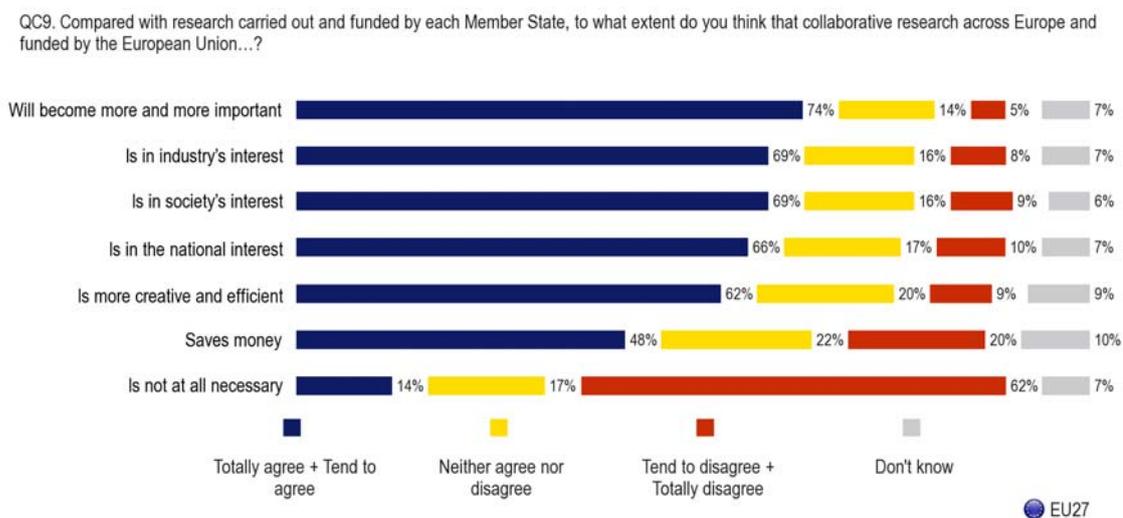
	Health issues	Energy issues	Environment issues	Social and economic issues	Space research	Manufacturing technologies	New information and communication technologies (Internet, etc.)	Other (SPONTANEOUS)	DK
EU27	40%	21%	18%	14%	2%	2%	1%	-	2%
BE	48%	16%	16%	13%	3%	3%	1%	-	-
BG	35%	14%	13%	26%	1%	4%	2%	-	5%
CZ	38%	20%	16%	20%	1%	3%	1%	-	1%
DK	33%	26%	23%	13%	1%	2%	1%	-	1%
DE	27%	30%	25%	15%	1%	1%	-	-	1%
EE	32%	22%	13%	23%	2%	4%	1%	1%	2%
IE	53%	21%	10%	10%	-	1%	1%	1%	3%
EL	51%	10%	21%	14%	1%	2%	1%	-	-
ES	46%	10%	13%	22%	2%	2%	2%	1%	2%
FR	50%	17%	17%	11%	1%	1%	1%	-	2%
IT	35%	22%	19%	13%	5%	3%	1%	-	2%
CY	65%	7%	17%	9%	-	-	1%	-	1%
LV	40%	19%	9%	22%	2%	6%	1%	-	1%
LT	42%	19%	9%	21%	1%	3%	2%	-	3%
LU	39%	19%	21%	14%	3%	2%	2%	-	-
HU	42%	24%	16%	14%	2%	1%	-	-	1%
MT	55%	21%	13%	7%	-	2%	-	-	2%
NL	36%	22%	20%	16%	1%	2%	2%	-	1%
AT	31%	21%	24%	12%	4%	4%	1%	1%	2%
PL	56%	15%	10%	7%	3%	2%	2%	1%	4%
PT	54%	12%	13%	12%	4%	2%	-	-	3%
RO	42%	14%	15%	18%	2%	3%	2%	-	4%
SI	27%	16%	24%	25%	2%	3%	2%	1%	-
SK	45%	14%	15%	17%	2%	3%	3%	-	1%
FI	24%	20%	25%	27%	2%	1%	1%	-	-
SE	16%	27%	41%	12%	1%	1%	1%	-	1%
UK	40%	27%	17%	9%	2%	1%	2%	-	2%
HR	40%	13%	12%	25%	1%	4%	1%	-	4%
TR	34%	13%	8%	22%	3%	2%	3%	-	15%
IS	33%	23%	22%	15%	-	3%	2%	1%	1%
NO	25%	22%	34%	15%	1%	1%	1%	-	1%
CH	20%	25%	34%	14%	2%	1%	2%	1%	1%

* In bold, the highest results per country; in italics the lowest results per country; the grey rectangle shows the highest results per value; the rectangle with black borders shows the lowest results per value.

6.1.2: Collaboration between different EU Member States

- Collaborative research across Europe and funded by the European Union will help –

When asked about their view on collaborative research across Europe funded by the EU, we see that Europeans are on the whole positive. A broad majority (74%) think that such collaboration will become more important although only 48% think that it saves money.



We next look at each of the statements about collaborative research in more detail.

- Collaborative research will become more and more important –

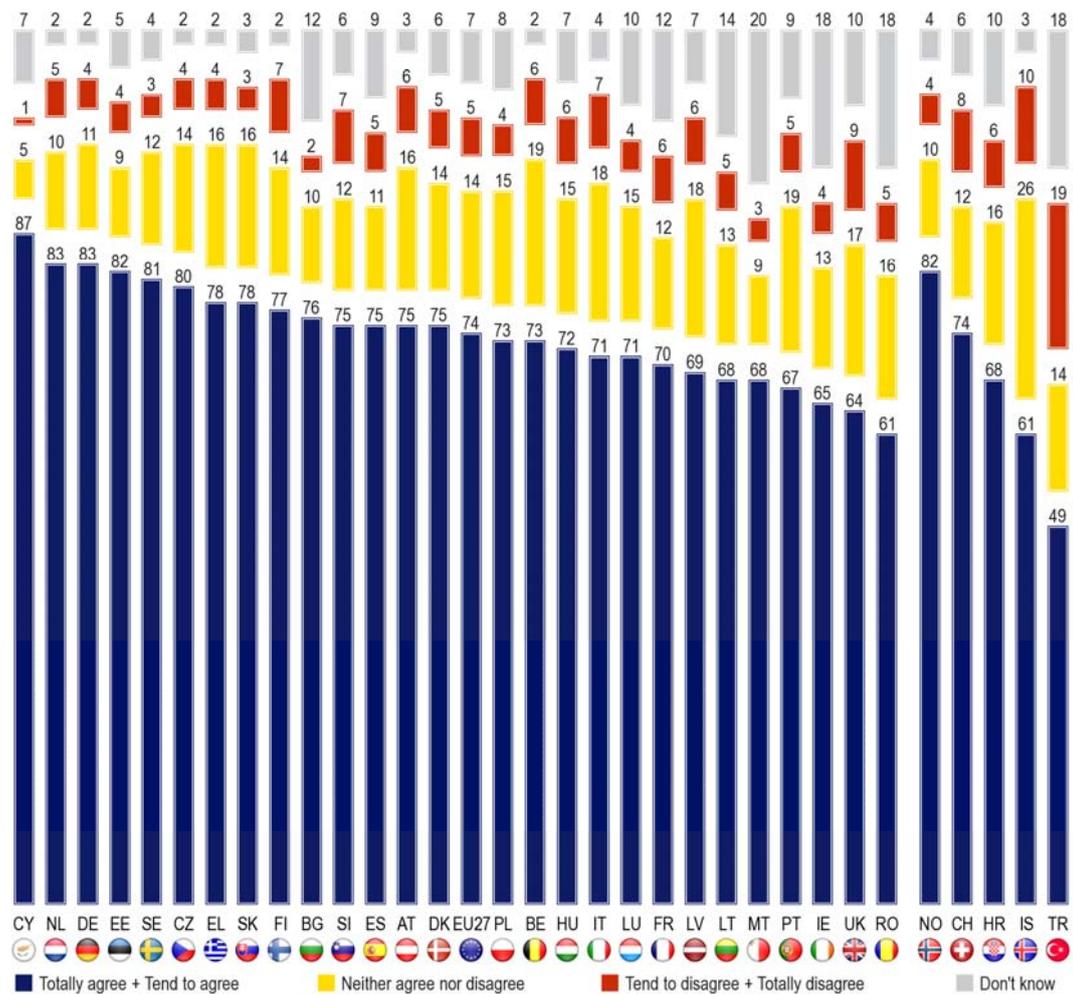
The survey shows first and foremost that Europeans believe that collaborative research across Europe and funded by the European Union will become more and more important. As noted above, around three out of four Europeans (74%) agree with this statement while only five percent disagree⁶².

⁶² QC9.3 Compared with research carried out and funded by each Member State, to what extent do you think that collaborative research across Europe and funded by the European Union... Will become more and more important?

This widespread level of agreement exists throughout the European Union with the exception of Turkey, which is the only country where just under half of respondents agree (49%). In the other countries, agreement is obtained from 61% of respondents in Iceland and Romania to 87% of respondents in Cyprus.

QC9.3. Compared with research carried out and funded by each Member State, to what extent do you think that collaborative research across Europe and funded by the European Union...?

Will become more and more important



Even if overall the proportion of respondents that agree has not changed significantly since 2005 (+2), significant shifts are noted in some of the countries. The table below shows that swings in responses are most pronounced in Turkey where the proportion of respondents agreeing has fallen by 18 percentage points. Conversely, the proportion of respondents agreeing increased most strongly in Bulgaria (+15) showing that swings have taken place in either direction.

QC9.3 Compared with research carried out and funded by each Member State, to what extent do you think that collaborative research across Europe and funded by the European Union...?
Will become more and more important

		Totally agree + Tend to agree			Tend to disagree + Totally disagree		
		EB73.1 01-02/2010	EB63.1 01-02/2005	Diff. EB73.1- EB63.1	EB73.1 01-02/2010	EB63.1 01-02/2005	Diff. EB73.1- EB63.1
 EU27		74%	72%	+2	5%	5%	=
 BE		73%	80%	-7	6%	7%	-1
 DK		75%	77%	-2	5%	8%	-3
 DE		83%	83%	=	4%	4%	=
 EL		78%	74%	+4	4%	3%	+1
 ES		75%	61%	+14	5%	4%	+1
 FR		70%	74%	-4	6%	4%	+2
 IE		65%	69%	-4	4%	3%	+1
 IT		71%	66%	+5	7%	5%	+2
 LU		71%	72%	-1	4%	9%	-5
 NL		83%	81%	+2	5%	5%	=
 AT		75%	77%	-2	6%	3%	+3
 PT		67%	64%	+3	5%	2%	+3
 FI		77%	75%	+2	7%	7%	=
 SE		81%	78%	+3	3%	5%	-2
 UK		64%	55%	+9	9%	10%	-1
 CY		87%	84%	+3	1%	2%	-1
 CZ		80%	76%	+4	4%	6%	-2
 EE		82%	76%	+6	4%	3%	+1
 HU		72%	77%	-5	6%	5%	+1
 LV		69%	60%	+9	6%	5%	+1
 LT		68%	62%	+6	5%	3%	+2
 MT		68%	68%	=	3%	3%	=
 PL		73%	75%	-2	4%	4%	=
 SK		78%	69%	+9	3%	5%	-2
 SI		75%	74%	+1	7%	5%	+2
 BG		76%	61%	+15	2%	3%	-1
 RO		61%	66%	-5	5%	1%	+4
 HR		68%	67%	+1	6%	4%	+2
 TR		49%	67%	-18	19%	9%	+10
 IS		61%	66%	-5	10%	5%	+5
 NO		82%	81%	+1	4%	5%	-1
 CH		74%	79%	-5	8%	5%	+3

An analysis of the socio-demographic data reveals little variation in public opinion. However, we once again see in particular that Europeans who are very interested in science are more likely to agree (80%) than those with no interest in science (61%).

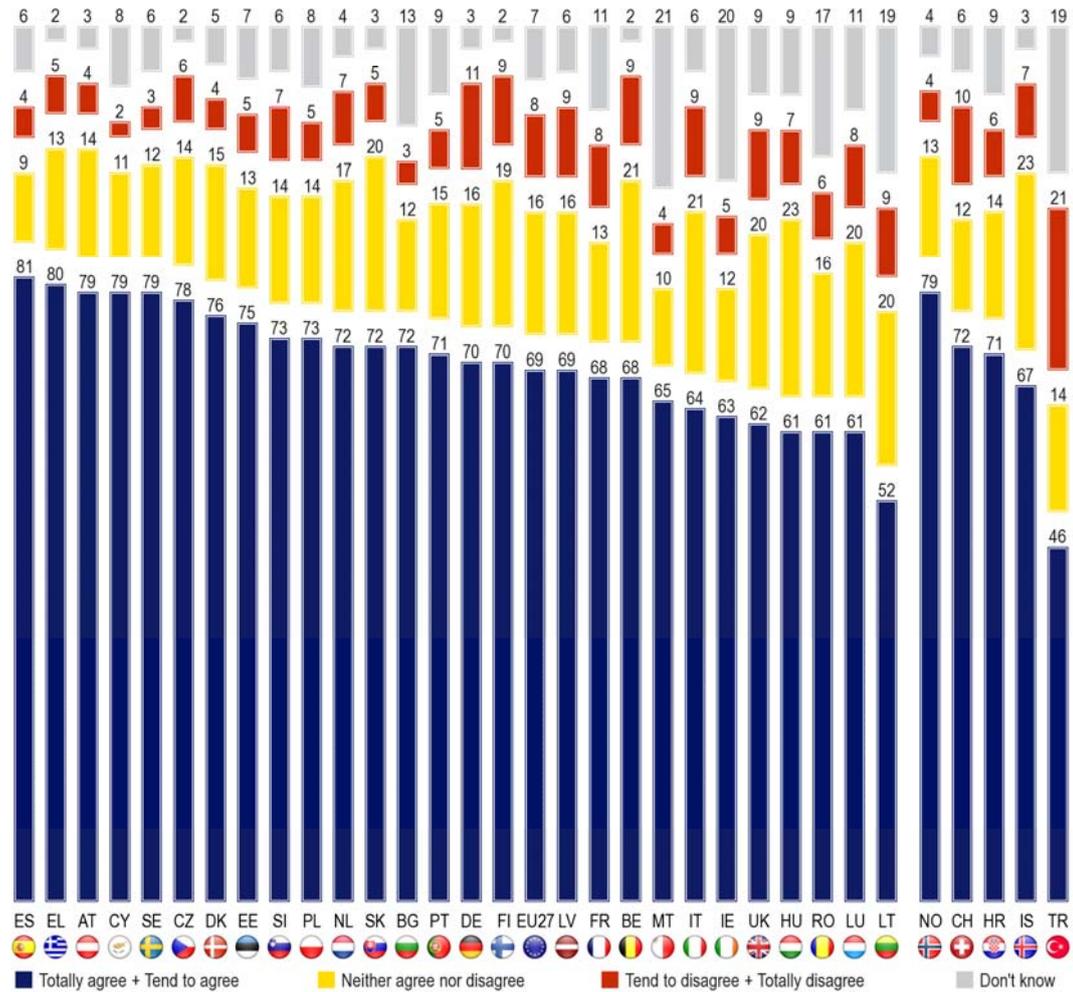
- Collaborative research is in the industry's interest –

Close to seven out of ten Europeans (69%) further agree that collaborative research is in the industry's interest while only eight percent disagree⁶³. At the country level we see that agreement levels range from 46% in Turkey to 81% in Spain whilst disagreement levels are ten percent or lower in all countries except Turkey (21%) and Germany (11%).

⁶³ QC9.5 Compared with research carried out and funded by each Member State, to what extent do you think that collaborative research across Europe and funded by the European Union... Is in industry's interest?

QC9.5. Compared with research carried out and funded by each Member State, to what extent do you think that collaborative research across Europe and funded by the European Union...?

Is in industry's interest



When we compare the 2010 study with the 2005 study, we see that in some countries significant shifts in public opinion have occurred, which can be in either direction. In Spain, far fewer respondents agreed in 2005 than is now the case (+18) whereas in Turkey we see a change from 61% of respondents agreeing in 2005 to 46% in 2010.

QC9.5 Compared with research carried out and funded by each Member State, to what extent do you think that collaborative research across Europe and funded by the European Union...?
Is in industry's interest

		Totally agree + Tend to agree			Tend to disagree + Totally disagree		
		EB73.1 01-02/2010	EB63.1 01-02/2005	Diff. EB73.1- EB63.1	EB73.1 01-02/2010	EB63.1 01-02/2005	Diff. EB73.1- EB63.1
 EU27		69%	69%	=	8%	6%	+2
 BE		68%	78%	-10	9%	6%	+3
 DK		76%	79%	-3	4%	6%	-2
 DE		70%	71%	-1	11%	5%	+6
 EL		80%	67%	+13	5%	5%	=
 ES		81%	63%	+18	4%	3%	+1
 FR		68%	70%	-2	8%	8%	=
 IE		63%	67%	-4	5%	4%	+1
 IT		64%	67%	-3	9%	4%	+5
 LU		61%	71%	-10	8%	12%	-4
 NL		72%	78%	-6	7%	5%	+2
 AT		79%	71%	+8	4%	4%	=
 PT		71%	68%	+3	5%	2%	+3
 FI		70%	73%	-3	9%	9%	=
 SE		79%	77%	+2	3%	3%	=
 UK		62%	58%	+4	9%	10%	-1
 CY		79%	79%	=	2%	3%	-1
 CZ		78%	75%	+3	6%	7%	-1
 EE		75%	76%	-1	5%	3%	+2
 HU		61%	72%	-11	7%	5%	+2
 LV		69%	62%	+7	9%	5%	+4
 LT		52%	48%	+4	9%	8%	+1
 MT		65%	65%	=	4%	3%	+1
 PL		73%	80%	-7	5%	3%	+2
 SK		72%	65%	+7	5%	5%	=
 SI		73%	76%	-3	7%	4%	+3
 BG		72%	58%	+14	3%	3%	=
 RO		61%	64%	-3	6%	4%	+2
 HR		71%	66%	+5	6%	4%	+2
 TR		46%	61%	-15	21%	10%	+11
 IS		67%	63%	+4	7%	3%	+4
 NO		79%	81%	-2	4%	3%	+1
 CH		72%	75%	-3	10%	8%	+2

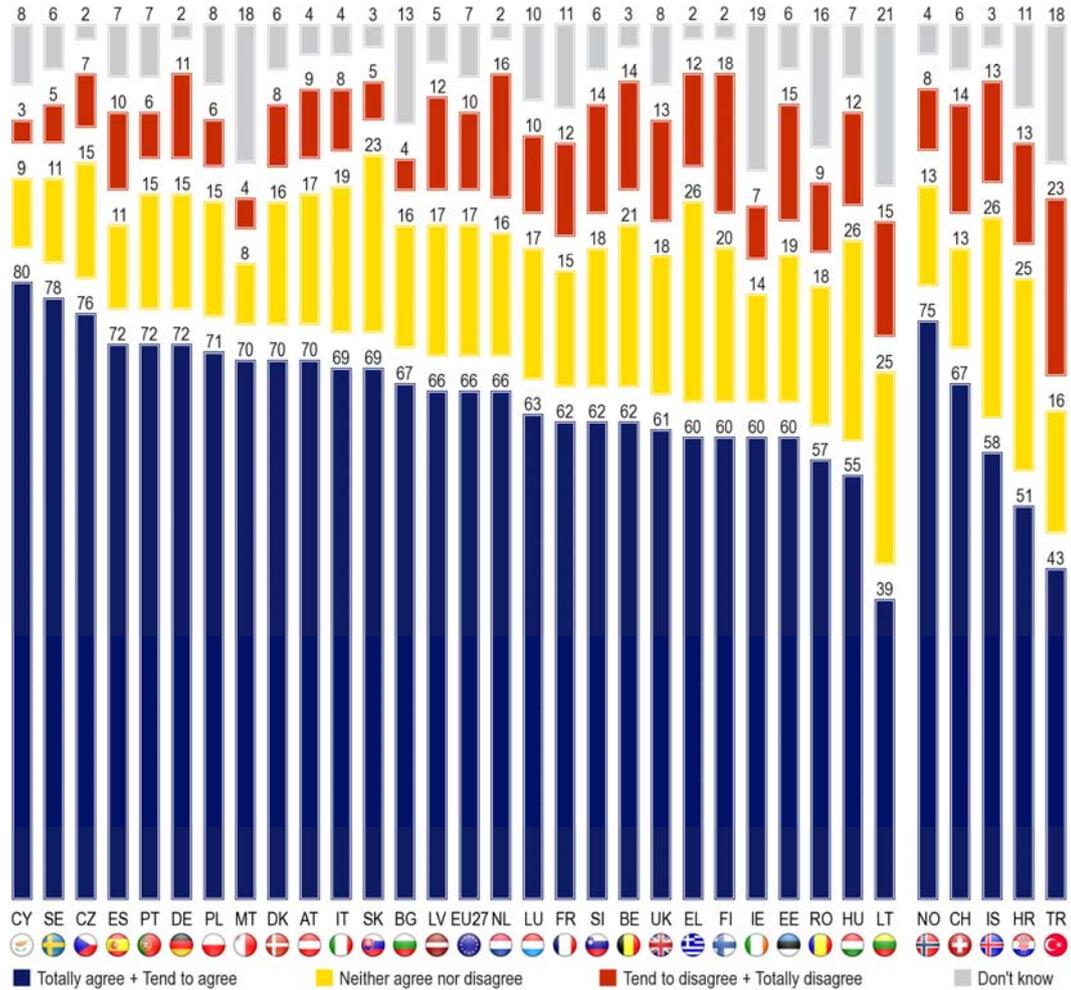
When we look at the socio-demographic data, we see the familiar cleavage between respondents who are very interested in science and those who are not at all interested in science (74% vs. 60%, respectively, agree).

- Two out of three Europeans believe collaborative research is in the national interest –

Two out of three Europeans agree that collaborative research is in the national interest while only one in ten disagrees⁶⁴. However, even if it is the majority view in all countries, there are marked differences in the level of agreement. There are four countries where three quarters or more of respondents agree: Cyprus (80%), Sweden (78%), the Czech Republic (76%) and Norway (75%). At the opposite end of the scale, less than half of respondents in two countries agree with the statement that collaborative research is in the national interest: Lithuania (39%) and Turkey (43%).

⁶⁴ QC9.4 Compared with research carried out and funded by each Member State, to what extent do you think that collaborative research across Europe and funded by the European Union... Is in the national interest?

QC9.4. Compared with research carried out and funded by each Member State, to what extent do you think that collaborative research across Europe and funded by the European Union...?
Is in the national interest



Again we see little change since 2005 in the overall results. In most countries, swings in view are slight but can be in either direction. Significant changes are noted in Bulgaria where 58% of respondents agreed in 2005 and this is 67% of respondents in 2010. Spain, likewise, sees an increase from 55% in 2005 to 72% in 2010 who agree, whereas the reverse is noted for Turkey where 56% of respondents agreed in 2005 compared to just 43% in 2010.

QC9.4 Compared with research carried out and funded by each Member State, to what extent do you think that collaborative research across Europe and funded by the European Union...?
Is in the national interest

		Totally agree + Tend to agree			Tend to disagree + Totally disagree		
		EB73.1 01-02/2010	EB63.1 01-02/2005	Diff. EB73.1- EB63.1	EB73.1 01-02/2010	EB63.1 01-02/2005	Diff. EB73.1- EB63.1
 EU27		66%	65%	+1	10%	9%	+1
 BE		62%	72%	-10	14%	11%	+3
 DK		70%	70%	=	8%	10%	-2
 DE		72%	71%	+1	11%	9%	+2
 EL		60%	63%	-3	12%	8%	+4
 ES		72%	55%	+17	10%	7%	+3
 FR		62%	66%	-4	12%	10%	+2
 IE		60%	66%	-6	7%	4%	+3
 IT		69%	67%	+2	8%	6%	+2
 LU		63%	71%	-8	10%	11%	-1
 NL		66%	69%	-3	16%	11%	+5
 AT		70%	67%	+3	9%	8%	+1
 PT		72%	66%	+6	6%	3%	+3
 FI		60%	61%	-1	18%	18%	=
 SE		78%	73%	+5	5%	6%	-1
 UK		61%	52%	+9	13%	13%	=
 CY		80%	72%	+8	3%	5%	-2
 CZ		76%	67%	+9	7%	9%	-2
 EE		60%	59%	+1	15%	14%	+1
 HU		55%	57%	-2	12%	12%	=
 LV		66%	60%	+6	12%	6%	+6
 LT		39%	39%	=	15%	13%	+2
 MT		70%	69%	+1	4%	4%	=
 PL		71%	78%	-7	6%	4%	+2
 SK		69%	56%	+13	5%	9%	-4
 SI		62%	64%	-2	14%	10%	+4
 BG		67%	58%	+9	4%	3%	+1
 RO		57%	61%	-4	9%	5%	+4
 HR		51%	53%	-2	13%	9%	+4
 TR		43%	56%	-13	23%	13%	+10
 IS		58%	60%	-2	13%	7%	+6
 NO		75%	77%	-2	8%	8%	=
 CH		67%	71%	-4	14%	10%	+4

- Over six out of ten Europeans believe collaborative research is in society's interest –

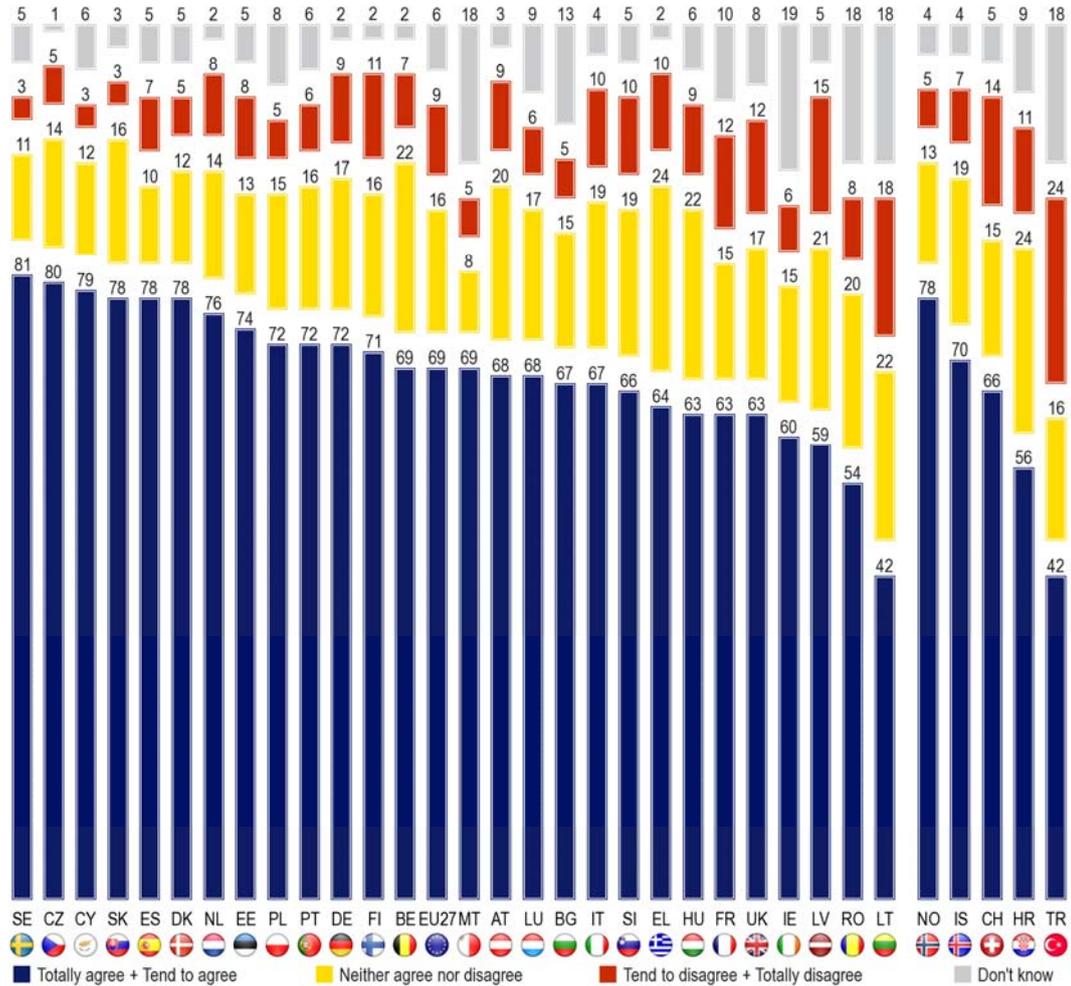
The view that collaborative research is also in society's interest is just slightly less widespread though still held by a clear majority (62%). Only 9% of respondents disagree that collaborative research is in the society's interest⁶⁵.

As the following figure shows, throughout the surveyed countries the majority view is that collaborative research is in society's interest, but agreement levels vary strongly and range from 42% in Lithuania and Turkey to 81% in Sweden. Turkey is the only country where over one-fifth disagrees (24%) with next highest disagreement levels noted in Lithuania (18%) and Latvia (15%).

⁶⁵ QC9.6 Compared with research carried out and funded by each Member State, to what extent do you think that collaborative research across Europe and funded by the European Union...is in society's interest?

QC9.6. Compared with research carried out and funded by each Member State, to what extent do you think that collaborative research across Europe and funded by the European Union...?

Is in society's interest



When we look at the socio-demographic data, we see that education influences people’s views in that it makes people more opinionated. However, once again the main determinant of opinion is interest in science: 75% of Europeans who are interested in science agree, compared to 58% of those who are not at all interested in science.

QC9.6 Compared with research carried out and funded by each Member State, to what extent do you think that collaborative research across Europe and funded by the European Union...?
Is in society's interest

	Total agree	Neither agree nor disagree	Total disagree	DK
EU27	69%	16%	9%	6%
Education (End of)				
 15-	65%	17%	9%	9%
16-19	68%	17%	9%	6%
20+	74%	15%	8%	3%
Still studying	68%	16%	10%	6%
Interested in scientific discoveries				
Yes, very	75%	14%	8%	3%
Yes, moderately	70%	17%	8%	5%
No	58%	19%	11%	12%

- Over six out of ten Europeans also believe collaborative research is more creative and efficient –

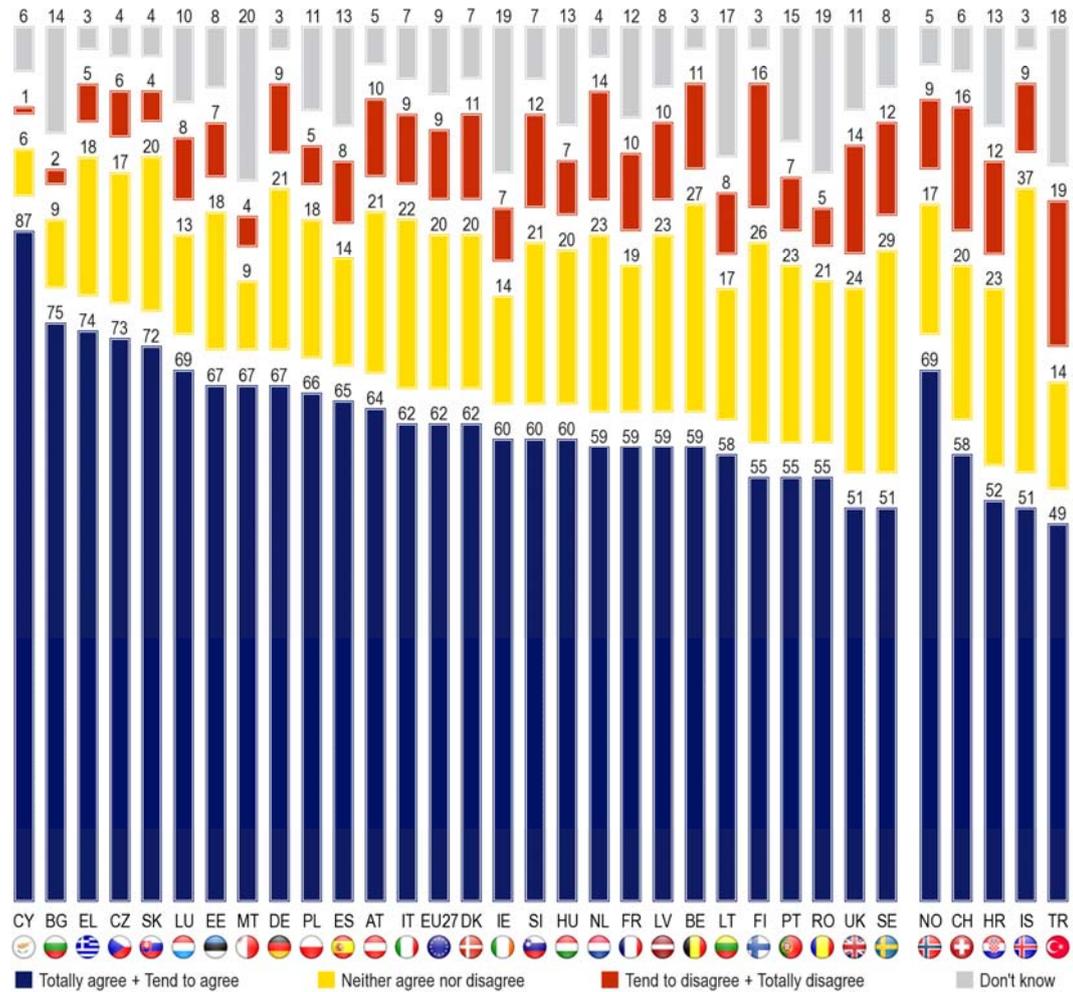
We see that overall nearly as many Europeans agree that collaborative research is more creative and efficient (62%)⁶⁶. Only 9% of Europeans disagree, while 20% neither agree nor disagree and 9% lack an opinion.

The view that collaborative research across Europe and funded by the European Union is more creative and efficient is supported by the majority of respondents in all countries surveyed, even if agreement levels range from 49% in Turkey to 87% in Cyprus.

⁶⁶ QC9.2 Compared with research carried out and funded by each Member State, to what extent do you think that collaborative research across Europe and funded by the European Union... Is more creative and efficient?

QC9.2. Compared with research carried out and funded by each Member State, to what extent do you think that collaborative research across Europe and funded by the European Union...?

Is more creative and efficient



Comparing these findings to those of 2005, the overall situation has not changed significantly (% agreeing: +2; % disagreeing -1). However, there are countries where views have changed considerably since 2005. The table below shows that the most extreme shifts have occurred in Bulgaria and Turkey, although in opposite directions. In Bulgaria we see an increase of 16 percentage points in the proportion of respondents agreeing whilst in Turkey we find a decrease of 16 percentage points.

QC9.2 Compared with research carried out and funded by each Member State, to what extent do you think that collaborative research across Europe and funded by the European Union...?
Is more creative and efficient

		Totally agree + Tend to agree			Tend to disagree + Totally disagree		
		EB73.1 01-02/2010	EB63.1 01-02/2005	Diff. EB73.1- EB63.1	EB73.1 01-02/2010	EB63.1 01-02/2005	Diff. EB73.1- EB63.1
 EU27		62%	60%	+2	9%	10%	-1
 BE		59%	73%	-14	11%	10%	+1
 DK		62%	63%	-1	11%	14%	-3
 DE		67%	70%	-3	9%	8%	+1
 EL		74%	74%	=	5%	4%	+1
 ES		65%	54%	+11	8%	5%	+3
 FR		59%	65%	-6	10%	11%	-1
 IE		60%	58%	+2	7%	4%	+3
 IT		62%	56%	+6	9%	9%	=
 LU		69%	78%	-9	8%	8%	=
 NL		59%	65%	-6	14%	12%	+2
 AT		64%	68%	-4	10%	8%	+2
 PT		55%	56%	-1	7%	4%	+3
 FI		55%	60%	-5	16%	18%	-2
 SE		51%	47%	+4	12%	17%	-5
 UK		51%	46%	+5	14%	14%	=
 CY		87%	87%	=	1%	1%	=
 CZ		73%	63%	+10	6%	11%	-5
 EE		67%	62%	+5	7%	8%	-1
 HU		60%	71%	-11	7%	6%	+1
 LV		59%	52%	+7	10%	8%	+2
 LT		58%	49%	+9	8%	7%	+1
 MT		67%	66%	+1	4%	3%	+1
 PL		66%	61%	+5	5%	9%	-4
 SK		72%	58%	+14	4%	7%	-3
 SI		60%	63%	-3	12%	8%	+4
 BG		75%	59%	+16	2%	3%	-1
 RO		55%	58%	-3	5%	3%	+2
 HR		52%	52%	=	12%	7%	+5
 TR		49%	65%	-16	19%	8%	+11
 IS		51%	59%	-8	9%	5%	+4
 NO		69%	70%	-1	9%	9%	=
 CH		58%	72%	-14	16%	11%	+5

When we look at the social groups, the same pattern appears with the "interest in science" indicator producing the most significant variation: 67% of Europeans who are interested in science agree that collaborative research is more creative compared to 51% of Europeans who are not at all interested in science.

- And over six out of ten Europeans believe collaborative research is necessary. –

The same proportion of Europeans further considers that collaborative research is necessary. Respondents were presented with a negatively worded statement:

"Compared with research carried out and funded by each Member State, to what extent do you think that collaborative research across Europe and funded by the European Union is not at all necessary?"

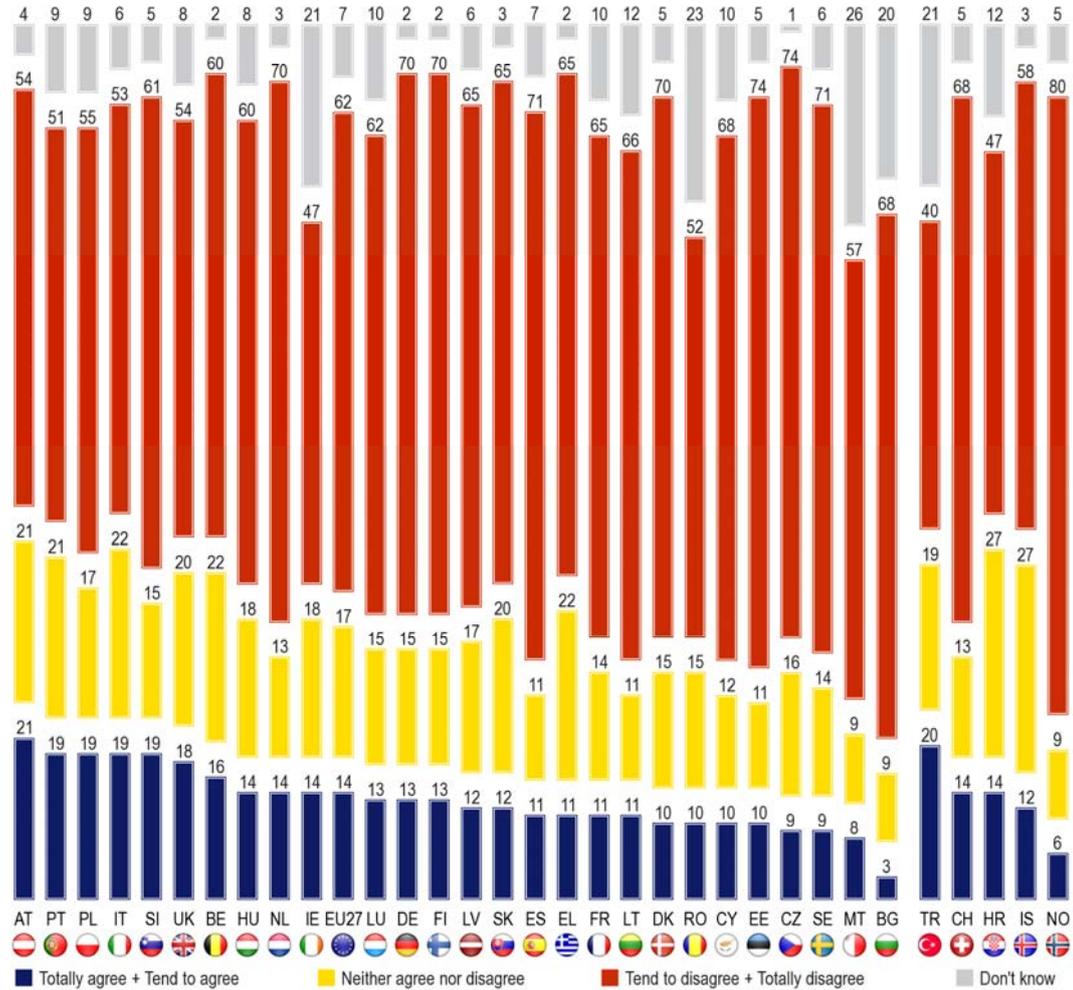
A majority of 62% of respondents disagree with the statement while only 14% of respondents agree⁶⁷.

Compared to the statements discussed so far, we find a slightly more divided public opinion across Europe. While in all countries the majority view is one of disagreement, there are three countries where this is the case for fewer than half of the respondents: Turkey (40%), followed by Ireland and Croatia (47% each). In Norway, the highest level of disagreement is noted (80%), followed by the Czech Republic and Estonia (74% each).

⁶⁷ QC9.7 Compared with research carried out and funded by each Member State, to what extent do you think that collaborative research across Europe and funded by the European Union...not at all necessary?

QC9.7. Compared with research carried out and funded by each Member State, to what extent do you think that collaborative research across Europe and funded by the European Union...?

Is not at all necessary



The socio-demographic analyses reveal that men are more likely to disagree than women (64% vs. 60%) and that education here as well is a powerful indicator: 70% of Europeans who stayed in full-time education until age 20 or over disagree, compared to 56% of those who left school aged 15 or younger. However, the “interested in science” indicator is once again the most telling divider of opinion: 70% of Europeans who are interested in science disagree that collaboration is not at all necessary compared to only 48% of those who are not interested in science.

QC9.7 Compared with research carried out and funded by each Member State, to what extent do you think that collaborative research across Europe and funded by the European Union...?
Is not at all necessary

	Total agree	Neither agree nor disagree	Total disagree	DK
EU27	14%	17%	62%	7%
Sex				
 Male	15%	15%	64%	6%
 Female	13%	18%	60%	9%
Education (End of)				
 15-	15%	18%	56%	11%
16-19	16%	18%	59%	7%
20+	13%	13%	70%	4%
Still studying	10%	15%	68%	7%
Interested in scientific discoveries				
Yes, very	14%	12%	70%	4%
Yes, moderately	14%	17%	63%	6%
No	16%	22%	48%	14%

- Just under one European in two agrees that collaborative research can save money. –

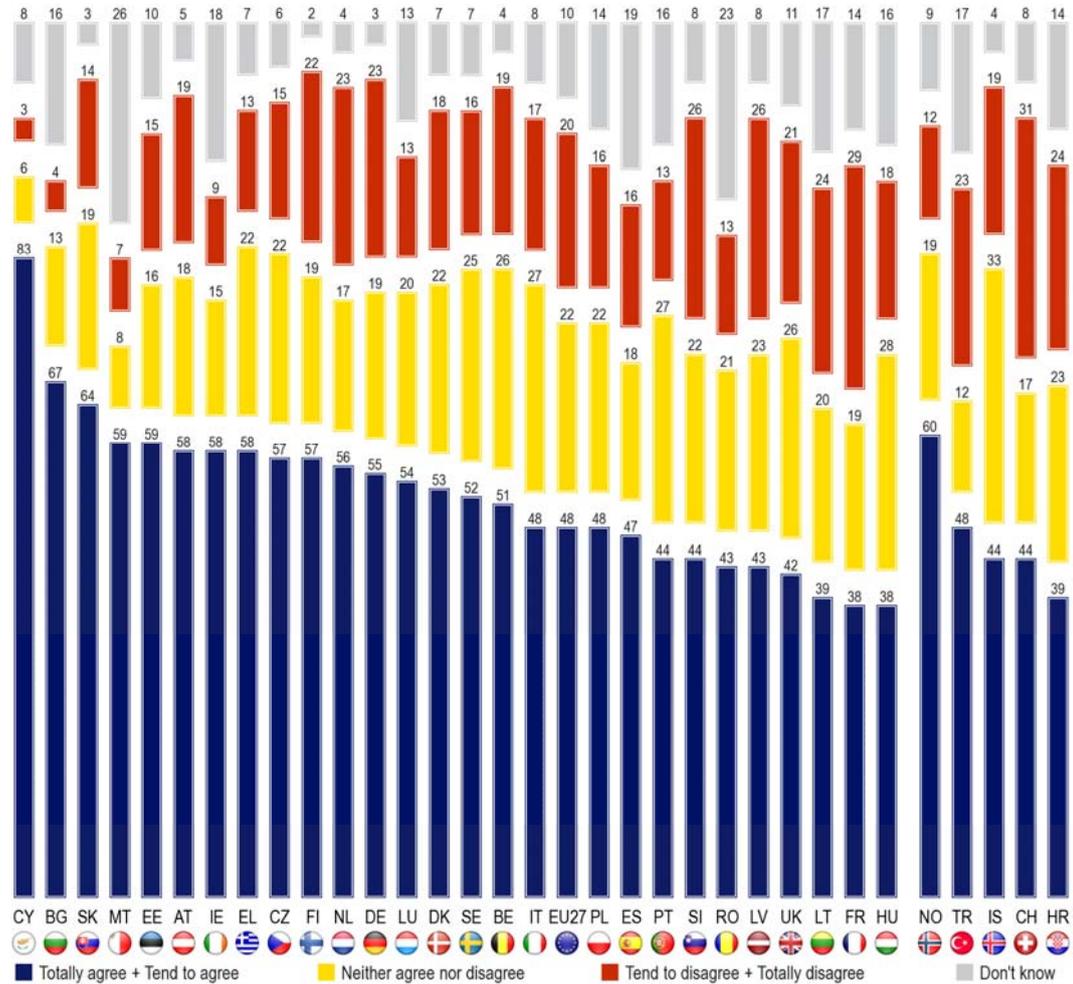
Finally, the survey shows that when it comes to the benefits of collaborative research, Europeans are most reserved about the financial gains to be made. The figure below shows that nearly half of Europeans (48%) agree that collaborative research can save money while 20% of respondents disagree with this statement⁶⁸. Just over one respondent in five (22%) neither agrees nor disagrees and one respondent in ten lacks an opinion.

Even if a majority of Europeans in all countries surveyed believes that collaborative research can save money, the survey shows large differences in opinion. Agreement levels range from 38% in France and Hungary to 83% in Cyprus. The next highest agreement level drops to 67% in Bulgaria. Disagreement levels are highest in Switzerland (31%) and France (29%).

⁶⁸ QC9.1 Compared with research carried out and funded by each Member State, to what extent do you think that collaborative research across Europe and funded by the European Union... Saves money?

QC9.1. Compared with research carried out and funded by each Member State, to what extent do you think that collaborative research across Europe and funded by the European Union...?

Saves money



When we compare the 2010 findings with those of the 2005 study we see a slight increase to more disagreement from 16% in 2005 to 20% in the latest survey while agreement levels have not changed significantly at the EU27 level (-2). However, at the country level we see more marked changes in response; for example respondents in Slovakia have changed from 44% agreeing in 2005 to 64% now agreeing, while respondents in Hungary have shown the opposite reaction going from 65% who agreed in 2005 to only 38% who agree in 2010.

QC9.1 Compared with research carried out and funded by each Member State, to what extent do you think that collaborative research across Europe and funded by the European Union...?
Saves money

		Totally agree + Tend to agree			Tend to disagree + Totally disagree		
		EB73.1 01-02/2010	EB63.1 01-02/2005	Diff. EB73.1- EB63.1	EB73.1 01-02/2010	EB63.1 01-02/2005	Diff. EB73.1- EB63.1
 EU27		48%	50%	-2	20%	16%	+4
 BE		51%	62%	-11	19%	16%	+3
 DK		53%	56%	-3	18%	16%	+2
 DE		55%	59%	-4	23%	17%	+6
 EL		58%	51%	+7	13%	12%	+1
 ES		47%	48%	-1	16%	8%	+8
 FR		38%	45%	-7	29%	25%	+4
 IE		58%	55%	+3	9%	8%	+1
 IT		48%	51%	-3	17%	11%	+6
 LU		54%	61%	-7	13%	19%	-6
 NL		56%	64%	-8	23%	14%	+9
 AT		58%	62%	-4	19%	9%	+10
 PT		44%	49%	-5	13%	7%	+6
 FI		57%	53%	+4	22%	22%	=
 SE		52%	45%	+7	16%	17%	-1
 UK		42%	38%	+4	21%	22%	-1
 CY		83%	75%	+8	3%	6%	-3
 CZ		57%	54%	+3	15%	20%	-5
 EE		59%	57%	+2	15%	12%	+3
 HU		38%	65%	-27	18%	11%	+7
 LV		43%	35%	+8	26%	22%	+4
 LT		39%	36%	+3	24%	16%	+8
 MT		59%	51%	+8	7%	9%	-2
 PL		48%	46%	+2	16%	14%	+2
 SK		64%	44%	+20	14%	20%	-6
 SI		44%	48%	-4	26%	19%	+7
 BG		67%	48%	+19	4%	7%	-3
 RO		43%	45%	-2	13%	10%	+3
 HR		39%	39%	=	24%	19%	+5
 TR		48%	62%	-14	23%	10%	+13
 IS		44%	45%	-1	19%	11%	+8
 NO		60%	59%	+1	12%	14%	-2
 CH		44%	58%	-14	31%	20%	+11

When we look at the socio-demographic data, we see that men are more likely to agree than women (52% vs. 45%) and the same goes for Europeans who stayed in full-time education until the age of 20 or over compared to those who left school aged 15 or younger (52% vs. 44%). The difference is largely explained by higher don't know levels among women and those who left full-time education early while disagreement levels hardly vary, a pattern that is found for all items about collaborative research. The clearest distinction is noted for the "informed in science" indicator: 56% of Europeans who feel very informed in scientific discoveries agree, compared to 44% of those who do not feel informed. The "interest in science" indicator also produces the familiar distinction.

QC9.1 Compared with research carried out and funded by each Member State, to what extent do you think that collaborative research across Europe and funded by the European Union...?
Saves money

	Total agree	Neither agree nor disagree	Total disagree	DK
EU27	48%	22%	20%	10%
Sex				
 Male	52%	21%	19%	8%
 Female	45%	22%	20%	13%
Education (End of)				
 15-	44%	21%	18%	17%
16-19	49%	22%	19%	10%
20+	52%	22%	20%	6%
Still studying	48%	21%	22%	9%
Interested in scientific discoveries				
Yes, very	53%	19%	21%	7%
Yes, moderately	49%	23%	19%	9%
No	42%	22%	19%	17%
Informed about scientific discoveries				
Yes, very well	56%	18%	21%	5%
Yes, moderately	50%	23%	19%	8%
No	44%	21%	20%	15%

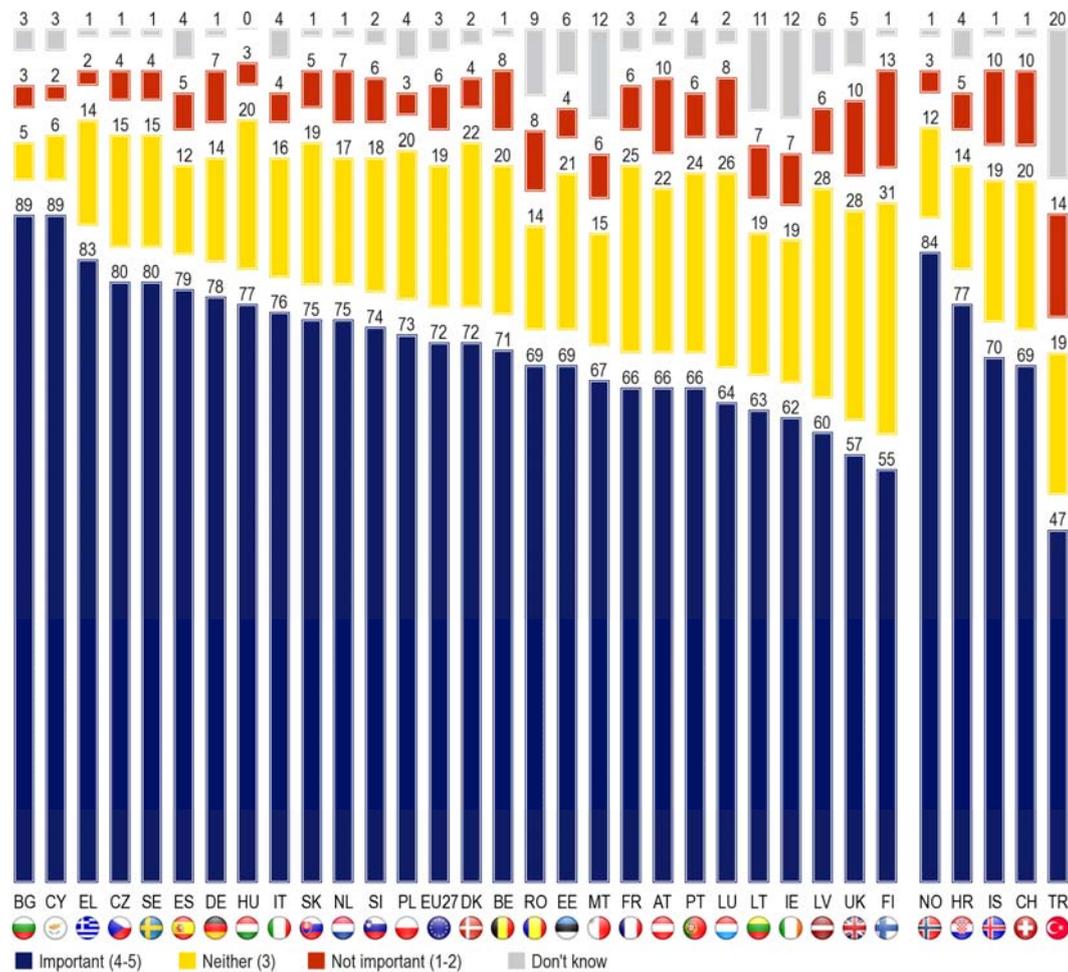
6.1.3: Joint research collaboration between EU Member States

- Joint collaboration between Member States widely supported -

Investigation into views about joint research collaboration between EU Member States shows that Europeans feel that to make the European Union a major player at global level it is important that EU Member States collaborate in joint research programs. Overall, 72% of Europeans agree⁶⁹. However, public opinion varies considerably with agreement levels ranging from 47% in Turkey to 89% in Cyprus.

QC13.1. Here is a list of measures that could be taken to make the European Union a major player at global level. For each of them, please tell me how important or not you think it is, using a 1 to 5 scale. '1' means that you think a measure is "not at all important", and 5 that it is a "very important" measure. The remaining numbers indicate something between these two positions.

The governments of the different EU Member States collaborating in joint research programmes



⁶⁹ QC13.1 Here is a list of measures that could be taken to make the European Union a major player at global level...The governments of the different EU Member States collaborating in joint research programmes.

Looking at the socio-demographic data, there is some variation across the groups but the largest gap in opinions is once again noted for the "interested in science" indicator. 78% of respondents who are very interested in science think that joint collaboration is important whereas only 62% of respondents who express no interest in science think so.

- Major scientific facilities being planned together by EU Member States. –

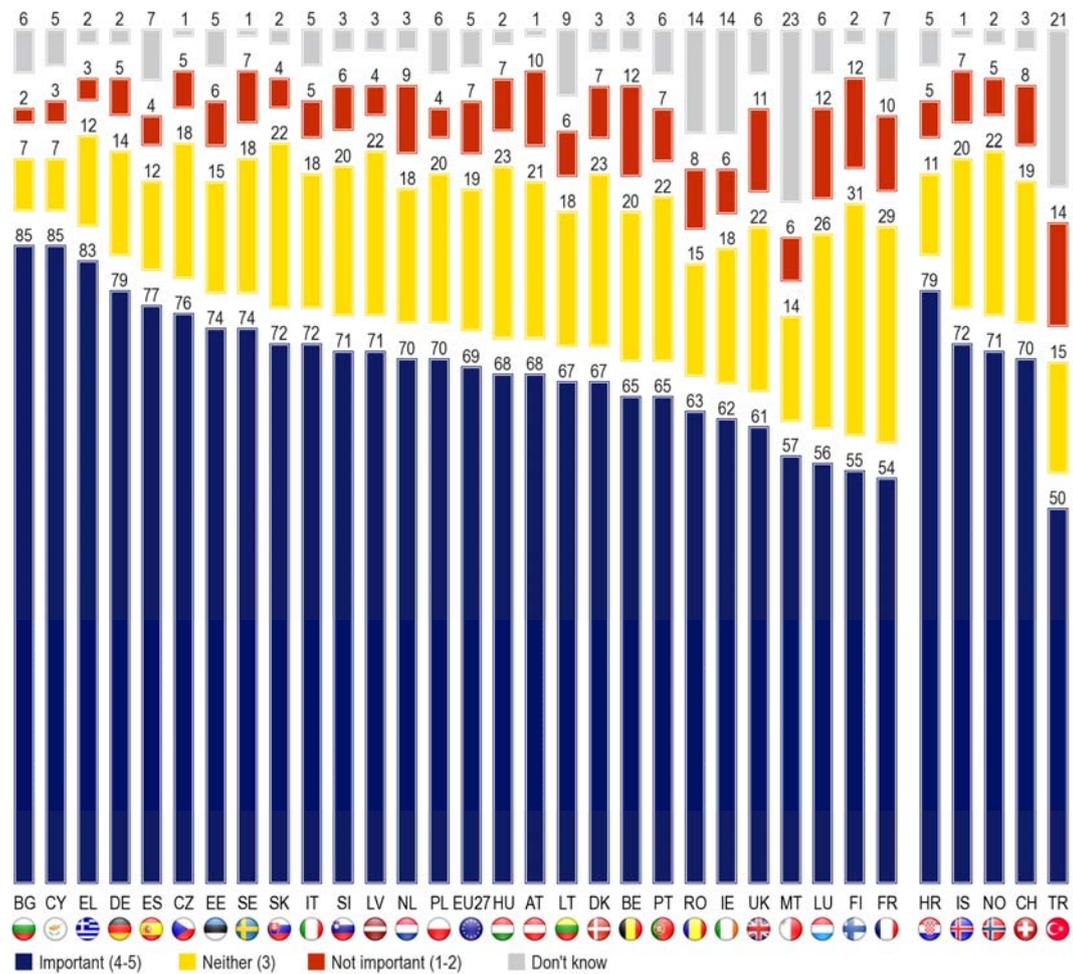
Close to seven out of ten (69%) of Europeans also feel that to make the European Union a major player at global level it is important that EU Member States plan major scientific facilities together while only seven percent do not consider this an important measure⁷⁰. A higher 19% of respondent at the EU27 level thought that is neither important nor not important.

There is considerable variation between countries, where respondents in Bulgaria and Cyprus at 85% consider it most important while respondents in Turkey least share this view.

⁷⁰ QC13.3 Here is a list of measures that could be taken to make the European Union a major player at global level...Major scientific facilities being planned together by EU Member States.

QC13.3. Here is a list of measures that could be taken to make the European Union a major player at global level. For each of them, please tell me how important or not you think it is, using a 1 to 5 scale. '1' means that you think a measure is "not at all important", and 5 that it is a "very important" measure. The remaining numbers indicate something between these two positions.

Major scientific facilities being planned together by EU Member States



Looking at the socio-demographic data, there is little variation across the groups. However, managers (77%) and those who are very interested in scientific discoveries (76%) have more than three quarters of respondents who think that the measure is important. At the other end of the scale, only 59% of respondents who have no interest in science think so.

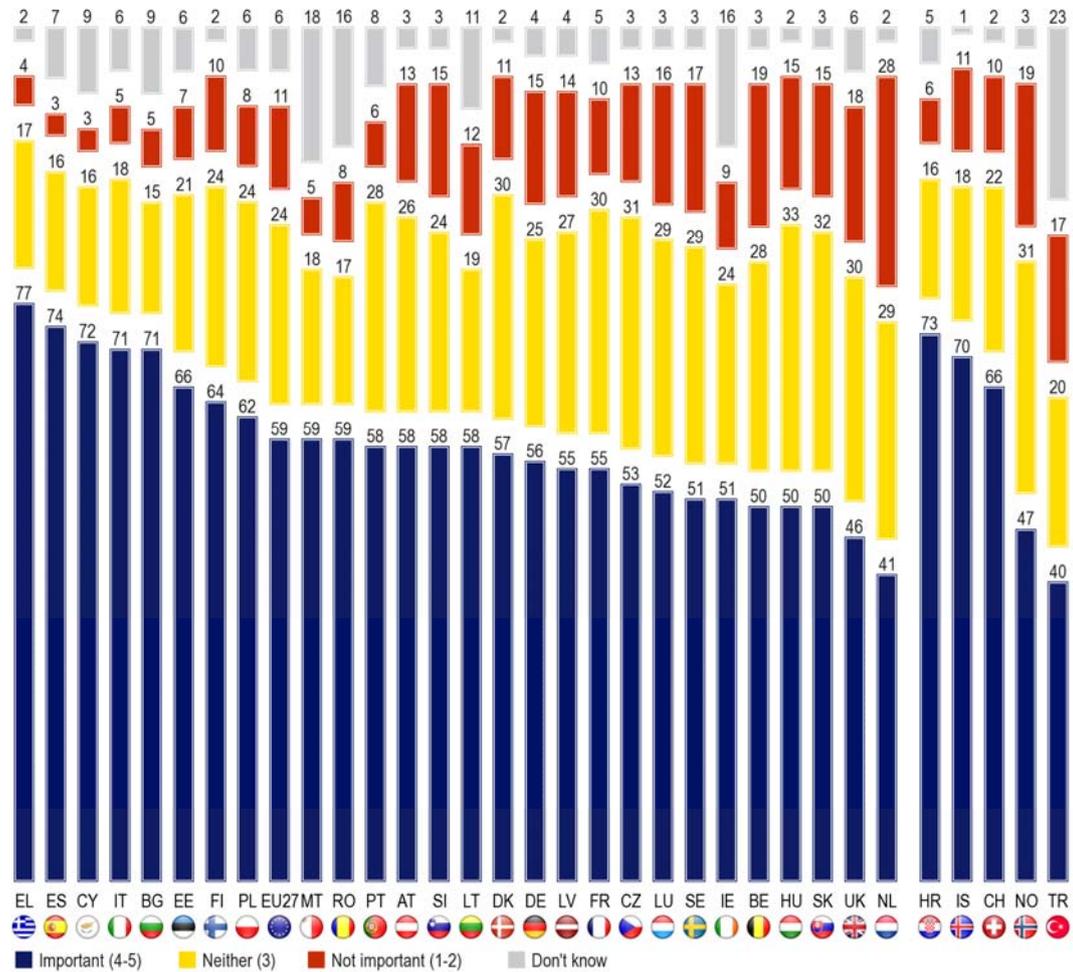
- Broad support for measure where researchers moving from one Member State to another as a normal dimension in their careers. –

Close to six out of ten Europeans (59%) believe that the measure whereby EU researchers moving from one Member State to another is a normal dimension in their careers is important to make the European Union a major player at global level⁷¹. The survey shows a wide variation between countries where respondents in Greece most support the measure (77%), followed by respondents in Spain (74%). At the other end of the scale, there are four countries where less than half of respondents think that this measure is important: Norway at 47%, the United Kingdom at 46%, the Netherlands at 41% and Turkey at 40% respondents.

⁷¹ QC13.2 Here is a list of measures that could be taken to make the European Union a major player at global level...Researchers moving from one Member State to another as a normal dimension in their careers.

QC13.2. Here is a list of measures that could be taken to make the European Union a major player at global level. For each of them, please tell me how important or not you think it is, using a 1 to 5 scale. '1' means that you think a measure is "not at all important", and 5 that it is a "very important" measure. The remaining numbers indicate something between these two positions.

Researchers moving from one Member State to another as a normal dimension in their careers



Looking at the socio-demographic results, we see that self-employed respondents (66%), those who completed their full-time education age 20 or over (65%) and managers (63%) score somewhat above the EU average. The same goes for those respondents who feel very informed (64%) or who are very interested (63%) in scientific discoveries.

QC13.2 Here is a list of measures that could be taken to make the European Union a major player at global level. For each of them, please tell me how important or not you think it is, using a 1 to 5 scale. '1' means that you think a measure is "not at all important", and 5 that it is a "very important" measure. The remaining numbers indicate something between these two positions.

Researchers moving from one Member State to another as a normal dimension in their careers

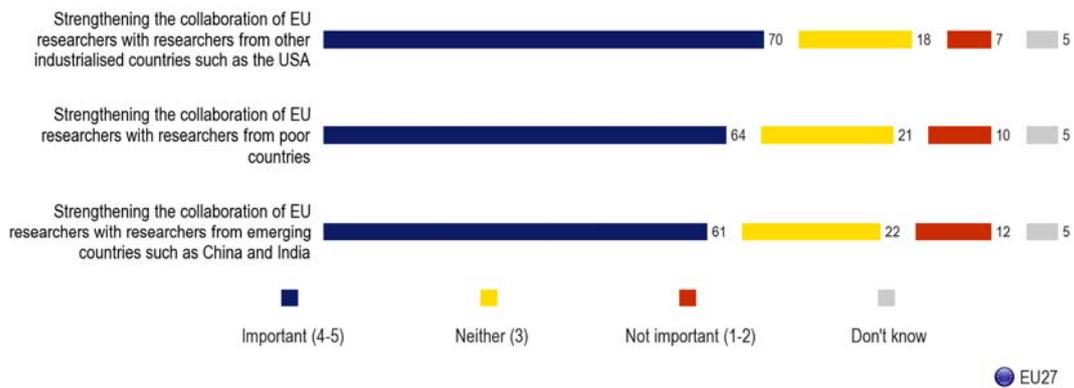
	Important (4-5)	Neither (3)	Not important (1-2)	DK
EU27	59%	24%	11%	6%
Respondent occupation scale				
 Self-employed	66%	21%	10%	3%
Managers	63%	23%	12%	2%
Other white collars	62%	25%	9%	4%
Manual workers	57%	26%	12%	5%
House persons	58%	24%	10%	8%
Unemployed	56%	26%	13%	5%
Retired	59%	23%	10%	8%
Students	53%	28%	14%	5%
Interested in scientific discoveries				
Yes, very	63%	22%	12%	3%
Yes, moderately	60%	25%	11%	4%
No	50%	26%	11%	13%
Informed about scientific discoveries				
Yes, very well	64%	22%	11%	3%
Yes, moderately	60%	25%	12%	3%
No	56%	24%	11%	9%

6.2 Collaboration between the EU and other countries in the field of science

- A majority of Europeans believes collaboration between the EU and other countries is important to make the EU a global player. -

On the whole, the survey shows that Europeans consider collaboration between the EU and other countries is important to make the EU a major player at global level. Seven out of ten Europeans think that joint research collaboration with the USA is important, 64% think that links with poorer countries should be strengthened and 61% of respondents think that strengthening links with China and India is important.

QC13. Here is a list of measures that could be taken to make the European Union a major player at global level. For each of them, please tell me how important or not you think it is, using a 1 to 5 scale. '1' means that you think a measure is "not at all important", and 5 that it is a "very important" measure. The remaining numbers indicate something between these two positions.



6.2.1: Strengthening collaboration between Europe and the USA

- Strengthening collaboration of EU researchers and the USA is important measure –

In order for the EU to be a major player at global level, seven out of ten respondents believe it is important that collaboration of EU researchers with other industrialised countries such as the USA is strengthened⁷². Only 7% of Europeans think that this measure is not important.

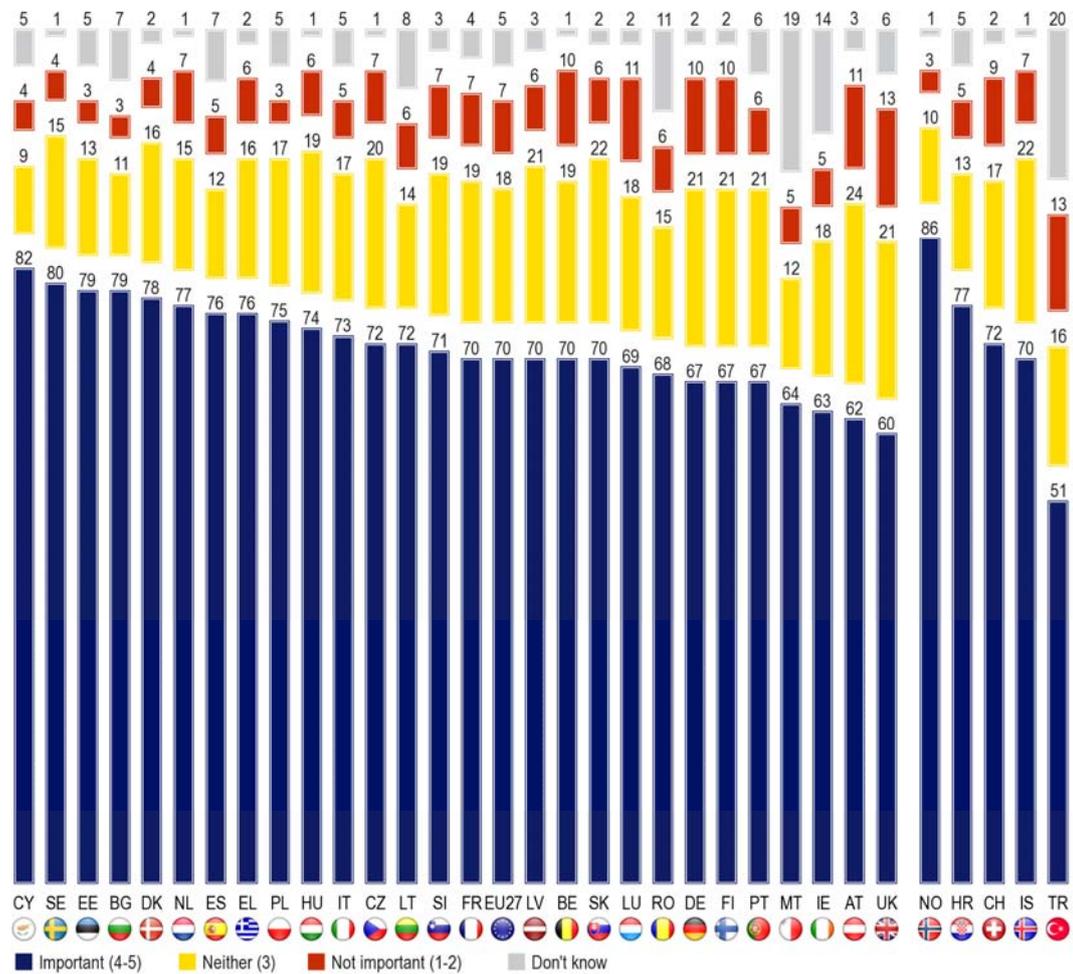
Respondents in Norway (86%) most widely support the measure, while lowest support is noted in Turkey, which at 51% is the only country where less than six out of ten respondents find the measure important.

In nine countries at least one-fifth of respondents take the middle position – that the measure is neither important nor not important: Austria (24%), Slovakia, Iceland (22% each), Latvia, Germany, Portugal, Finland, the UK (21% each) and the Czech Republic (20%). Furthermore, there are seven countries where ten percent or more consider the measure not to be important with Belgium, Germany and Finland at 10%, Austria and Luxembourg at 11% and the United Kingdom and Turkey at 13%. This suggests that for some Europeans the current level of collaboration is thought sufficient and further strengthening is not necessary.

⁷² QC13.4 Here is a list of measures that could be taken to make the European Union a major player at global level...Strengthening the collaboration of EU researchers with researchers from other industrialised countries such as the USA.

QC13.4. Here is a list of measures that could be taken to make the European Union a major player at global level. For each of them, please tell me how important or not you think it is, using a 1 to 5 scale. ‘1’ means that you think a measure is “not at all important”, and 5 that it is a “very important” measure. The remaining numbers indicate something between these two positions.

Strengthening the collaboration of EU researchers with researchers from other industrialised countries such as the USA



Looking at the socio-demographic data, there is some variation across the groups around the EU27 levels. Europeans who feel very informed about science agree the most (77%), followed by those that left full-time education age 20 or older (76%). Again the largest gap in opinions is once again noted for the “interest in science” indicator: 75% of respondents who are very interested in scientific discoveries think collaboration between Europe and the USA is important whereas only 60% of respondents who have no interest in science think so.

6.2.2: Strengthening collaboration between Europe and China and India

- Broad support for more collaboration with China and India. –

Slightly fewer Europeans (61%) than noted above feel that in order to make the EU a global player it is important to strengthen collaboration of EU researchers with emerging countries such as the China and India⁷³. The EU27 average for those who feel this measure is not important is 12%.

There is considerable variation between countries. In five countries three quarters or more of respondents think the measure is important: Denmark and Greece at 75%, Sweden at 78%, Cyprus at 84% and Norway at 87%. At the other end of the scale Turkey, at 48%, is the only country where less than half of respondents think that the issue is important.

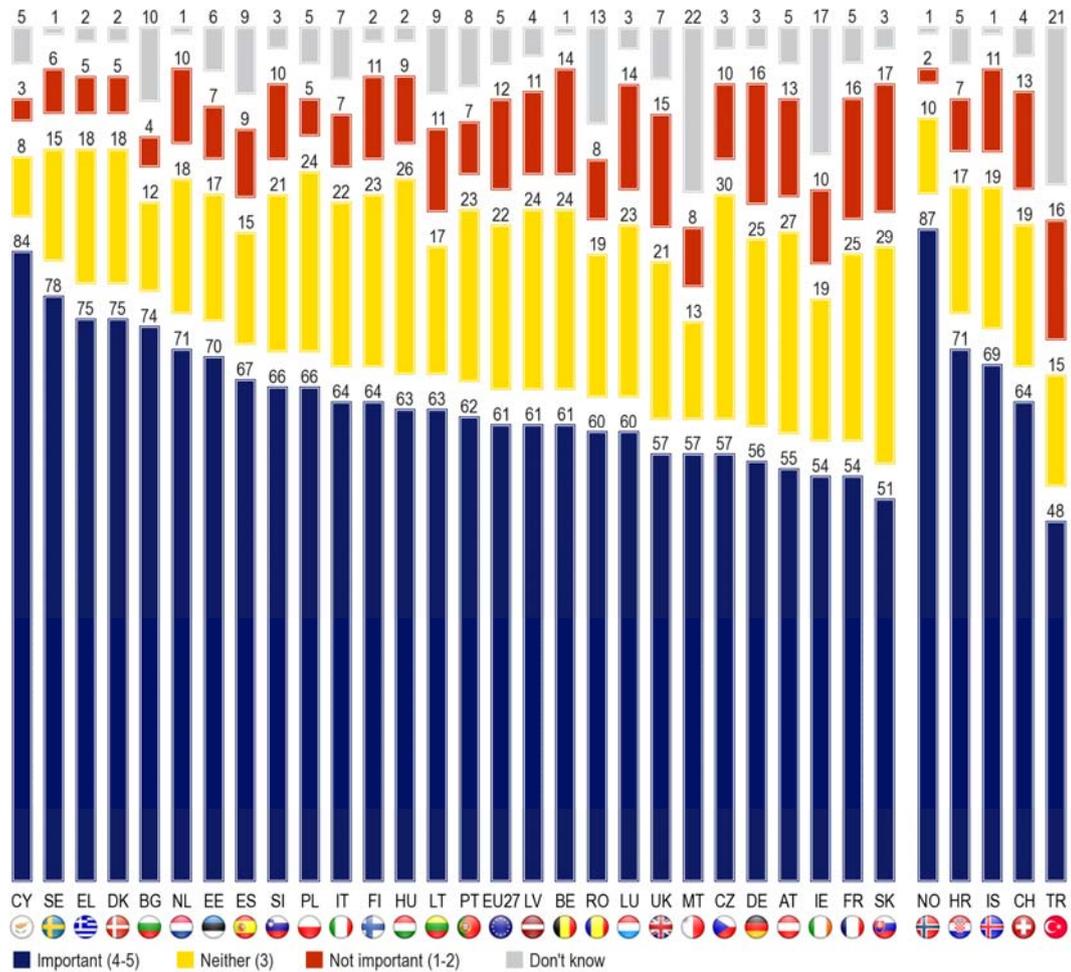
In six countries at least a quarter of respondents take the middle position – that the measure is neither important nor not important: Germany and France at 25%, Hungary at 26%, Austria at 27%, Slovakia at 29% and the Czech Republic at 30%.

Finally, there are five countries where 15% or more of respondents believe the measure is not important: the UK at 15%, Germany, France and Turkey at 16% and Slovakia at 17%.

⁷³ QC13.5 Here is a list of measures that could be taken to make the European Union a major player at global level...Strengthening the collaboration of EU researchers with researchers from emerging countries such as China and India.

QC13.5. Here is a list of measures that could be taken to make the European Union a major player at global level. For each of them, please tell me how important or not you think it is, using a 1 to 5 scale. ‘1’ means that you think a measure is “not at all important”, and 5 that it is a “very important” measure. The remaining numbers indicate something between these two positions.

Strengthening the collaboration of EU researchers with researchers from emerging countries such as China and India



The socio-demographic data shows the familiar pattern: Europeans who stayed in full-time education the longest (69%), those interested and informed in science (67% each) and the self-employed and managers (66% each) most often consider the measure as important. Again, the “interest in science” indicator produces the largest differences: 67% of respondents who are very interested in scientific discoveries think collaboration between the EU and China or India is important whereas only 52% of respondents with no interest in science think so.

6.2.3: Strengthening collaboration between Europe and poorer countries

- Collaboration with researchers in poor countries is also an important measure –

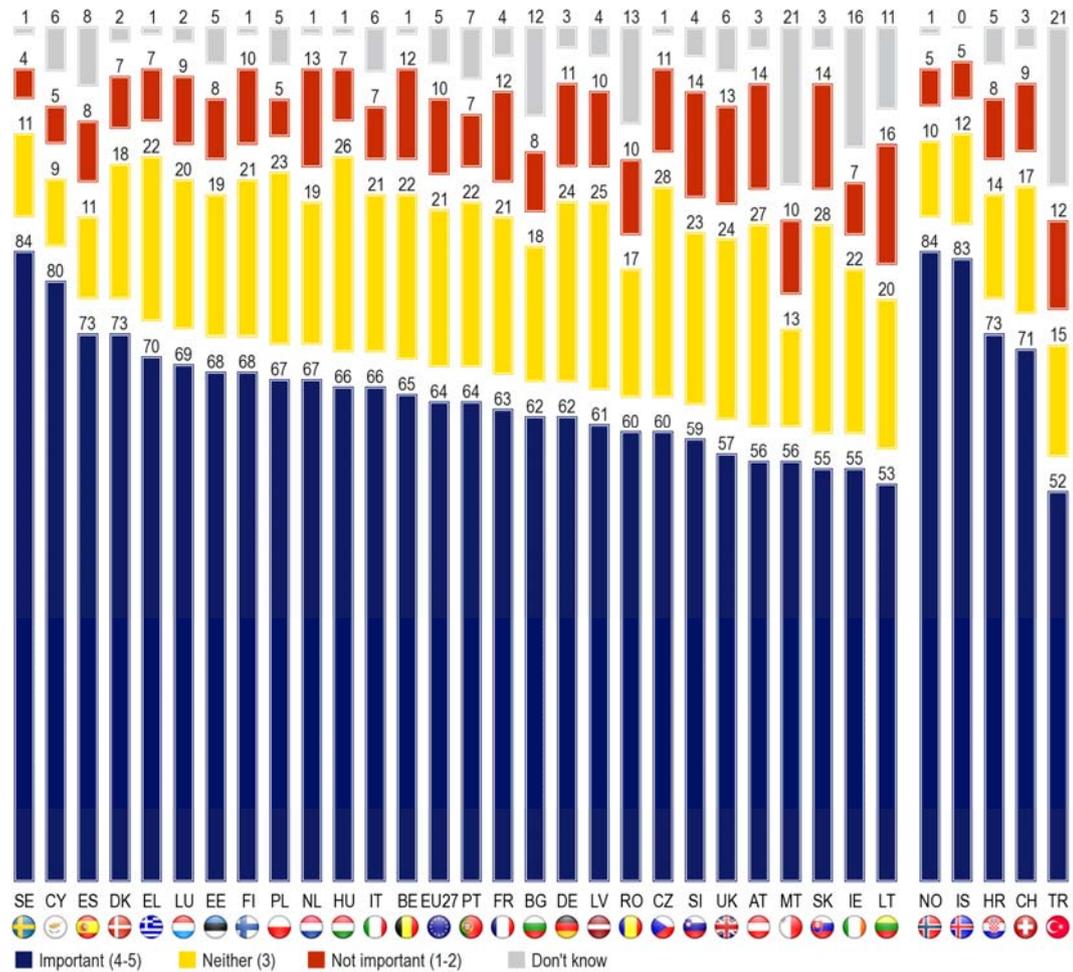
Close to two-thirds of Europeans (64%) feel that for the EU to become a global player it is important that the collaboration of the EU with researchers from poorer countries should be strengthened⁷⁴. Just over one European in five (21%) takes the middle position and one European in ten does not believe that this measure is important.

Support for this measure is broadest in Norway and Sweden (84% each), Iceland (83%) and Cyprus (80%), these are the four countries where more than three quarters of respondents think the measure is important. At the other end of the scale, we see that support is least widespread in Turkey (52%) and Lithuania (53%) even if an outright majority considers the measure important. At 16%, Lithuania is the only country where more than 15% of respondents believe the measure will not make the EU a major player at global level.

⁷⁴ QC13.6 Here is a list of measures that could be taken to make the European Union a major player at global level...Strengthening the collaboration of EU researchers with researchers from poor countries.

QC13.6. Here is a list of measures that could be taken to make the European Union a major player at global level. For each of them, please tell me how important or not you think it is, using a 1 to 5 scale. '1' means that you think a measure is "not at all important", and 5 that it is a "very important" measure. The remaining numbers indicate something between these two positions.

Strengthening the collaboration of EU researchers with researchers from poor countries

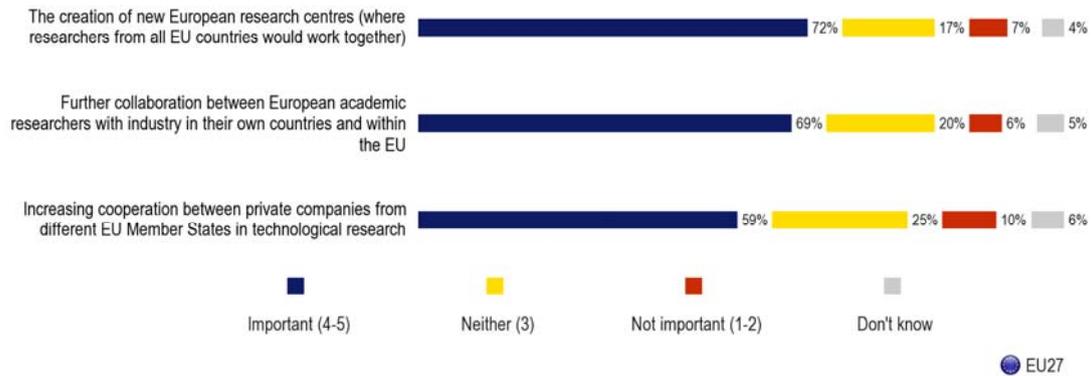


The socio-demographic data shows that education, occupation, interest in/feeling informed about science are again the most telling indicators of people’s opinions. Support for the measure is broadest amongst managers, those who stayed in full-time education the longest (71% each), and respondents who feel informed about or are interested in science (70% each). However, it is important to note – and this also holds for the two other items analysed in this section – that the level of disagreement is fairly stable across all socio-demographic groups. Rather, the analyses shows that the more educated, interested and informed people are, the more likely it is that they feel able to give an opinion about the importance of these measures.

6.3 European science at world-class level

We end this chapter with the analysis of public opinion on three further measures to make the EU a major player at the global level. The survey shows that over seven out of ten Europeans (72%) believe the creation of new European research centres is important in this regard. Furthermore, 69% believe that collaboration between research and industry is important and 59% feel that increasing cooperation between private research companies in the EU Member States is important. We next analyse the results for each of these three measures one by one.

QC13. Here is a list of measures that could be taken to make the European Union a major player at global level. For each of them, please tell me how important or not you think it is, using a 1 to 5 scale. '1' means that you think a measure is "not at all important", and 5 that it is a "very important" measure. The remaining numbers indicate something between these two positions.



6.3.1: Creation of new European research centres

- Creation of new European research centres desirable. –

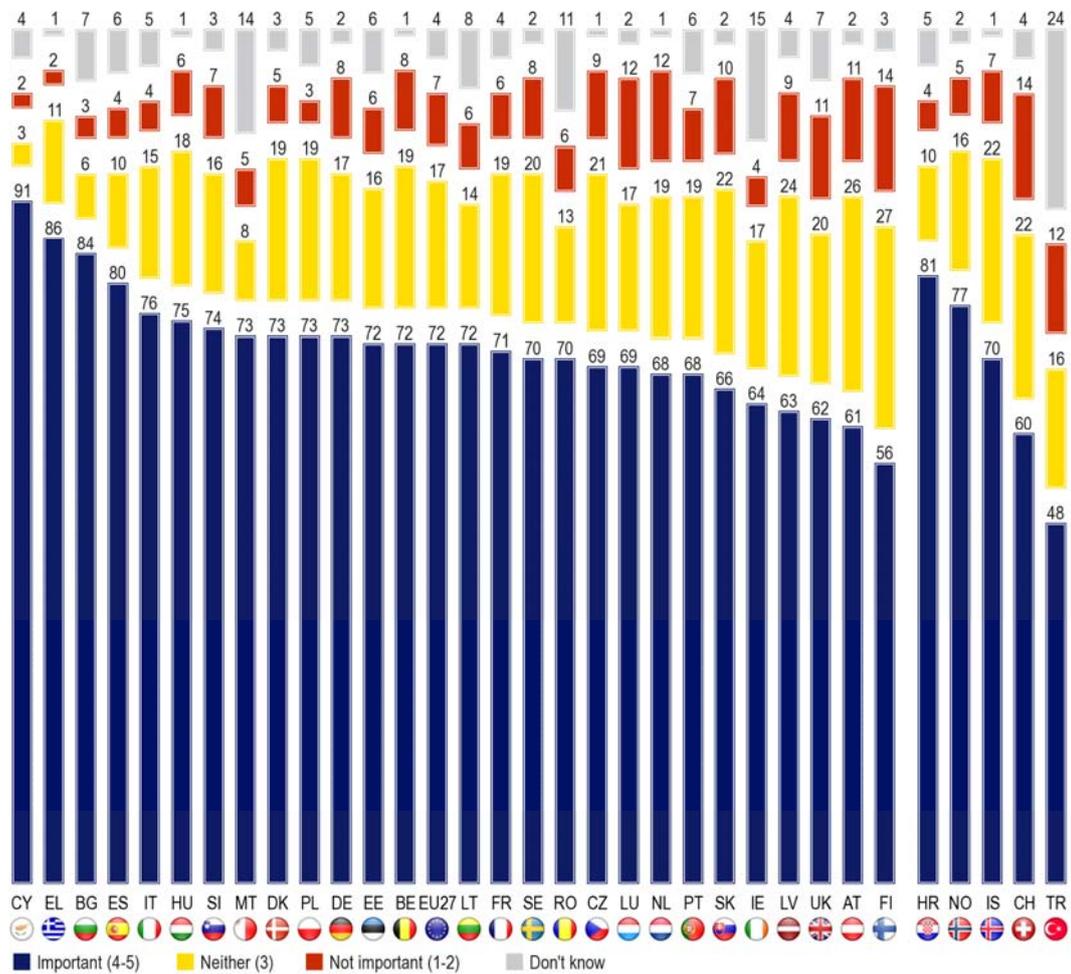
The creation of European research centres where researchers from all EU countries would work together is seen as an important measure to make the EU a major player at global level by 72% of Europeans⁷⁵. Only seven percent of Europeans disagree.

The country analyses show that there are eight countries where three quarters or more of respondents find the measure important agree: Hungary at 75%, Italy at 76%, Norway at 77%, Spain at 80%, Croatia at 81%, Bulgaria at 84%, Greece at 86% and Cyprus at 91%. At the other end of the scale Turkey - at 48% - is the only country where less than half of all respondents feel that the measure is important. The proportion of respondents who believe the issue is not important is below 15% in all countries surveyed.

⁷⁵ QC13.9 Here is a list of measures that could be taken to make the European Union a major player at global level...The creation of new European research centres (where researchers from all EU countries would work together).

QC13.9. Here is a list of measures that could be taken to make the European Union a major player at global level. For each of them, please tell me how important or not you think it is, using a 1 to 5 scale. ‘1’ means that you think a measure is “not at all important”, and 5 that it is a “very important” measure. The remaining numbers indicate something between these two positions.

The creation of new European research centres (where researchers from all EU countries would work together)



Looking at the socio-demographic data we see little variation across the groups compared to the EU27 average. The largest contrast in opinion is once again found on the “interest in science” indicator. 78% of respondents who are very interested in scientific discoveries think creation of new European research centres is important compared to 61% of respondents who have no interest in science.

6.3.2: Furthering collaboration between academic research and industry

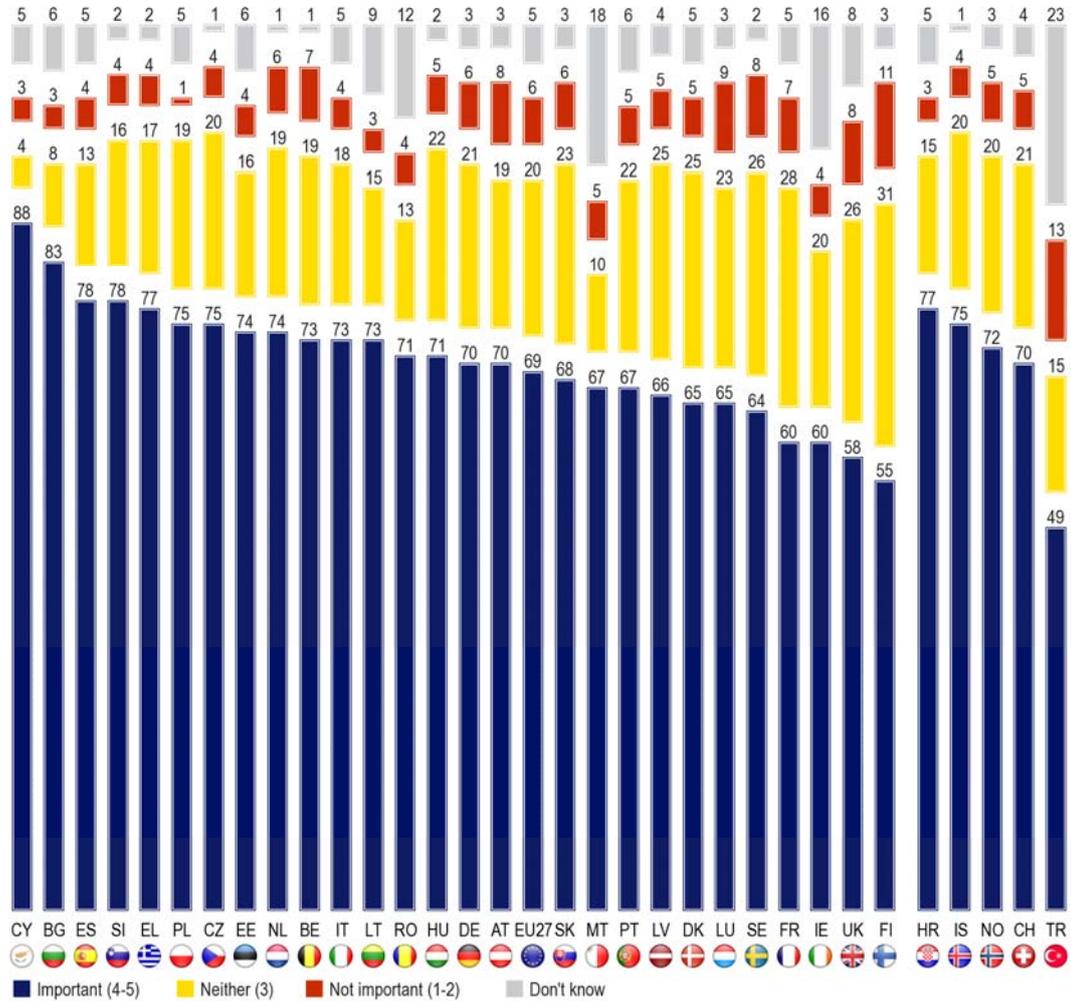
- Collaboration between European academic researchers with industry important. –

Europeans also in majority (69%) feel that for the EU to be a major player at global level, it is important that collaboration between academic researchers and industry is strengthened while only six percent feel this measure is not important⁷⁶.

There is considerable variation between countries, however, with nine countries where more than three quarters of respondents consider the measure to be important: the Czech Republic, Iceland and Poland at 75%, Greece and Croatia at 77%, Slovenia and Spain at 78%, Bulgaria at 83% and Cyprus at 88%. Turkey is the only country where less than half of the respondents feel that the measure is important (49%). However, at 13%, it is certainly not the case that respondents do not find the measure important. Rather, we see that many Turkish respondents (23% vs. EU average of 5%) are unable to give an opinion.

⁷⁶ QC13.8 Here is a list of measures that could be taken to make the European Union a major player at global level...Further collaboration between European academic researchers with industry in their own countries and within the EU.

QC13. 8. Here is a list of measures that could be taken to make the European Union a major player at global level. For each of them, please tell me how important or not you think it is, using a 1 to 5 scale. '1' means that you think a measure is "not at all important", and 5 that it is a "very important" measure. The remaining numbers indicate something between these two positions.



Looking at the socio-demographic data, we see that 77% of respondents who are very interested in scientific discoveries think collaboration between academic researchers and industry is important, compared to 58% of respondents with no interest in science. Managers and those that feel very informed about science (75% each) are the other two groups where three quarters of respondents think that collaboration between academic researchers and industry is important.

6.3.3: Increasing cooperation between private companies

- Six out of ten European believe that increasing the cooperation in technological research between private companies from different EU Member States is an important measure –

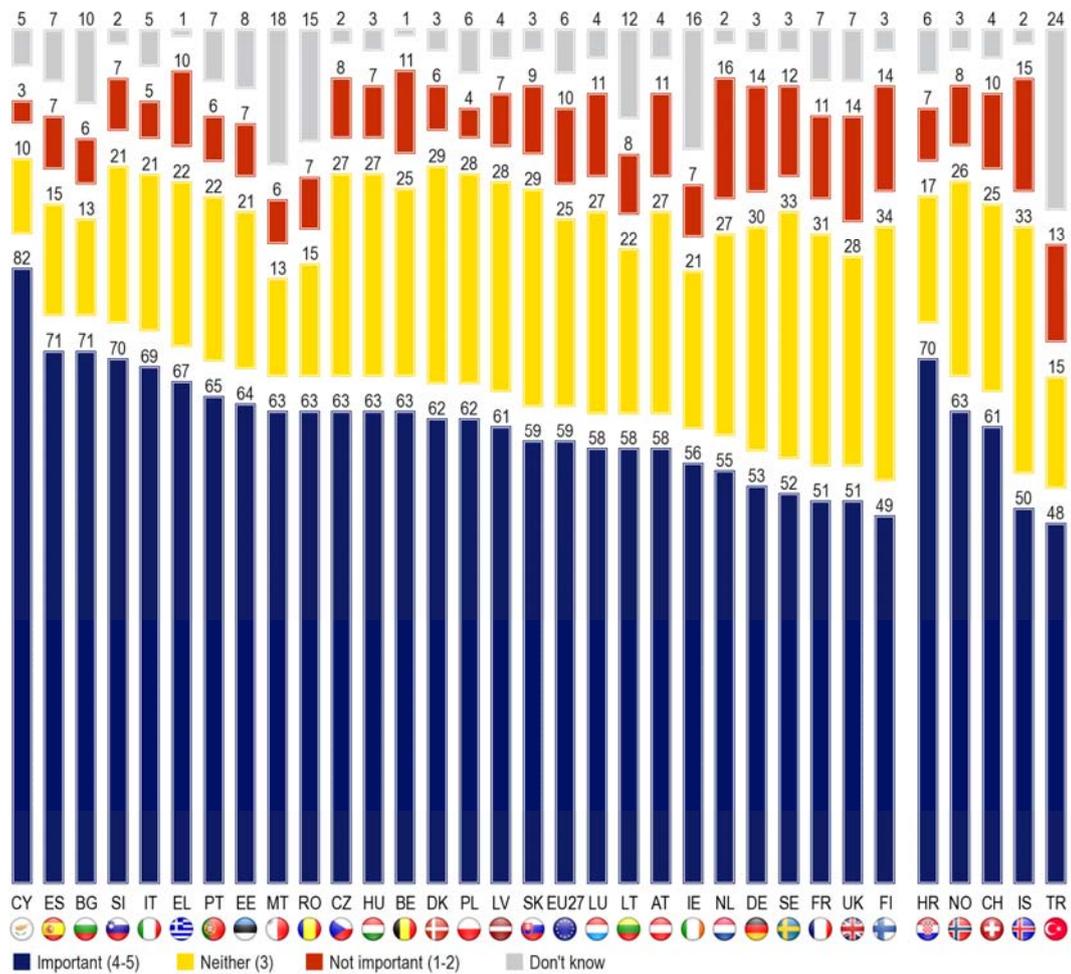
A majority of Europeans (59%) feel that for the EU to be a major player at global level, it is important that collaboration in technological research of private companies from different EU Member States should be increased⁷⁷. A quarter of Europeans takes the middle position on this measure and European in ten does not consider the measure important.

There is variation at country level with respondents in Cyprus (82%) most likely to find the measure important. Turkey (48%) and Finland (49%) are the only two countries where less than an outright majority finds the measure important. The proportion of respondents who find the measure is not important is highest in the Netherlands (16%). In Finland (34%), Sweden and Iceland (33% each) a third of respondents takes the middle position that the measure is neither important nor not important.

⁷⁷ QC13.7 Here is a list of measures that could be taken to make the European Union a major player at global level...Increasing cooperation between private companies from different EU Member States in technological research.

QC13.7. Here is a list of measures that could be taken to make the European Union a major player at global level. For each of them, please tell me how important or not you think it is, using a 1 to 5 scale. '1' means that you think a measure is "not at all important", and 5 that it is a "very important" measure. The remaining numbers indicate something between these two positions.

Increasing cooperation between private companies from different EU Member States in technological research



Looking at the socio-demographic data, we see that men are slightly more likely than women to agree that the issue is important (62% vs. 57%). Those who think the issue is the most important are those that are very interested in science (65%) and who feel very informed about it (64%). At the other end of the spectrum, we find that 50% of respondents who have no interest in science think that increasing cooperation between private companies is important.

CONCLUSION

Science and technology is a dynamic and rapidly changing field. Scientific advances occur at an increasingly rapid rate and the impact on society increases. Although individuals have to cope and adapt to changes brought about by developments in science and technology, it is likely that the acceptance or resistance to change may not reflect the true belief or understanding of the individual. In this study we attempt to show the underlying level of understanding and attitude of European citizens towards major scientific and technological advances.

The results of this latest Eurobarometer survey on science and technology show that European citizens consider themselves as generally well informed and are interested in science and technology developments. However, there is a need for more information and clarity. Moreover, there is a gap in understanding where those who are specifically interested in science feel that they are generally better informed than the group of people who have little to do with science and technology.

A further gap in information is seen where many see that their interest in science and technology issues is not adequately met by the information supply. This suggests that many respondents have a higher level of interest than the information stream can support. Those that have little to do with science and technology in particular feel that they are not well informed. The message about science and technology is therefore not adequately communicated, neither to those with knowledge and interest nor to those who have no real science and technology understanding.

Participation in public issues concerning science and technology is not high. This study shows that Europeans are generally not active in science and technology, only those who are specifically interested and most likely directly or indirectly involved in science are more likely to be actively involved in public science and technology issues.

The view that Europeans have about the image of science and technology appears clear and positive. However, Europeans have a less clear insight into the work of the scientist, what a scientist actually does, or the structure of the scientific community.

Optimism about science and technology is not high and although it may bring benefits, many see that science and technology cannot solve all the world's problems. There is a general shift towards scepticism compared to the 2005 survey.

For the decision-making processes in science and technology, Europeans feel that these are best left to the scientific community. However, even though Europeans feel that senior scientists are the best qualified to convey the messages about science they feel that this group is not very efficient in doing so.

There is a positive view of the effect of involvement with science on young people but Europeans feel that governments are not doing enough to stimulate wide interest. More efforts by governments to stimulate women to be involved with science is seen as necessary and would, if successful, have a beneficial effect on the development of the sciences in Europe.

There is no clear view on the effectiveness of European research. The perception of Europeans of the current level of investment in scientific research at the EU level is also not clear. However, on collaboration and expansion in the future, Europeans have a better view that this in would be a beneficial development.

Overall Europeans are now marginally less sensitive to the negative aspects of science and technology than they were in 2005, but they are also slightly less enthusiastic about the potential benefits of science and technology. This may point to a slight increase in scepticism, or to an overall increase in apathy, but may also point to a milder view where Europeans are more at ease and are generally less concerned about the potential drawbacks of scientific and technological developments.

Those who are involved directly with and are also very interested in science and technology have stronger views on all aspects studied in this report. This further strengthens the observation that the wider European population who have little to do with science and technology feel that they are not particularly well informed and possibly excluded from the science and technology world.

The findings of the survey do correspond with the overall effect of the Lisbon treaty of 2000 where the initiatives set out then to fully involve European citizens in science and technology do not seem to have yielded major structural improvements in the ten years to 2010, and this is reflected in the current public perception of science and technology.

ANNEXES

SPECIAL EUROBAROMETER 340

" Science and Technology "

TECHNICAL SPECIFICATIONS

Between the 29th of January and the 25th of February 2010, TNS Opinion & Social, a consortium created between TNS plc and TNS opinion, carried out wave 73.1 of the EUROBAROMETER, on request of the EUROPEAN COMMISSION, Directorate-General for Communication, "Research and Speechwriting".

The SPECIAL EUROBAROMETER N°340 ("Science and Technology") is part of wave 73.1 and covers the population of the respective nationalities of the European Union Member States, resident in each of the Member States and aged 15 years and over. The EUROBAROMETER 73.1 has also been conducted in two candidate countries (Croatia and Turkey) and in Switzerland, Iceland and Norway. In these countries, the survey covers the national population of citizens and the population of citizens of all the European Union Member States that are residents in these countries and have a sufficient command of the national languages to answer the questionnaire. The basic sample design applied in all states is a multi-stage, random (probability) one. In each country, a number of sampling points was drawn with probability proportional to population size (for a total coverage of the country) and to population density.

In order to do so, the sampling points were drawn systematically from each of the "administrative regional units", after stratification by individual unit and type of area. They thus represent the whole territory of the countries surveyed according to the EUROSTAT NUTS II (or equivalent) and according to the distribution of the resident population of the respective nationalities in terms of metropolitan, urban and rural areas. In each of the selected sampling points, a starting address was drawn, at random. Further addresses (every Nth address) were selected by standard "random route" procedures, from the initial address. In each household, the respondent was drawn, at random (following the "closest birthday rule"). All interviews were conducted face-to-face in people's homes and in the appropriate national language. As far as the data capture is concerned, CAPI (*Computer Assisted Personal Interview*) was used in those countries where this technique was available.

ABBREVIATIONS	COUNTRIES	INSTITUTES	N° INTERVIEWS	FIELDWORK DATES		POPULATION 15+
BE	Belgium	TNS Dimarso	1012	29/01	16/02	8.866.411
BG	Bulgaria	TNS BBSS	1009	29/01	07/02	6.584.957
CZ	Czech Rep.	TNS Aisa	1043	30/01	12/02	8.987.535
DK	Denmark	TNS Gallup DK	1006	29/01	17/02	4.503.365
DE	Germany	TNS Infratest	1531	30/01	16/02	64.545.601
EE	Estonia	Emor	1004	29/01	15/02	916.000
IE	Ireland	MRBI	1007	29/01	14/02	3.375.399
EL	Greece	TNS ICAP	1000	29/01	14/02	8.693.566
ES	Spain	TNS Demoscopia	1004	01/02	14/02	39.059.211
FR	France	TNS Sofres	1018	29/01	16/02	47.620.942
IT	Italy	TNS Infratest	1018	29/01	12/02	51.252.247
CY	Rep. of Cyprus	Synovate	502	30/01	14/02	651.400
LV	Latvia	TNS Latvia	1013	29/01	16/02	1.448.719
LT	Lithuania	TNS Gallup Lithuania	1026	29/01	09/02	2.849.359
LU	Luxembourg	TNS ILReS	503	29/01	13/02	404.907
HU	Hungary	TNS Hungary	1017	29/01	14/02	8.320.614
MT	Malta	MISCO	500	29/01	14/02	335.476
NL	Netherlands	TNS NIPO	1018	29/01	14/02	13.288.200
AT	Austria	Österreichisches Gallup-Institut	1000	29/01	14/02	6.973.277
PL	Poland	TNS OBOP	1000	30/01	14/02	32.306.436
PT	Portugal	TNS EUROTESTE	1027	30/01	16/02	8.080.915
RO	Romania	TNS CSOP	1060	29/01	10/02	18.246.731
SI	Slovenia	RM PLUS	1004	29/01	14/02	1.748.308
SK	Slovakia	TNS AISA SK	1030	30/01	11/02	4.549.954
FI	Finland	TNS Gallup Oy	1001	29/01	16/02	4.412.321
SE	Sweden	TNS GALLUP	1007	29/01	14/02	7.723.931
UK	United Kingdom	TNS UK	1311	29/01	15/02	51.081.866
HR	Croatia	Puls	1000	29/01	14/02	3.749.400
TR	Turkey	TNS Piar	1003	29/01	14/02	52.728.513
CH	Switzerland	Isopublic	1026	29/01	24/02	6.416.728
IS	Iceland	Capacent	501	30/01	14/02	252.277
NW	Norway	TNS Gallup	1037	02/02	25/02	3.886.395
TOTAL EU27			26671	29/01	17/02	406.557.138

For each country a comparison between the sample and the universe was carried out. The Universe description was derived from Eurostat population data or from national statistics offices. For all countries surveyed, a national weighting procedure, using marginal and intercellular weighting, was carried out based on this Universe description. In all countries, gender, age, region and size of locality were introduced in the iteration procedure. For international weighting (i.e. EU averages), TNS Opinion & Social applies the official population figures as provided by EUROSTAT or national statistic offices. The total population figures for input in this post-weighting procedure are listed above.

Readers are reminded that survey results are estimations, the accuracy of which, everything being equal, rests upon the sample size and upon the observed percentage. With samples of about 1,000 interviews, the real percentages vary within the following confidence limits:

Observed percentages	10% or 90%	20% or 80%	30% or 70%	40% or 60%	50%
Confidence limits	± 1.9 points	± 2.5 points	± 2.7 points	± 3.0 points	± 3.1 points