



## **Students' self-efficacy and fear of failure**

This chapter examines differences between countries and economies in students' general self-efficacy and fear of failure, and how they are associated with student and school characteristics. It also looks at how self-efficacy and fear of failure are related to reading performance, and explores whether students who expressed greater fear of failure are less satisfied with their lives.

Self-efficacy is the extent to which individuals believe in their own ability to engage in certain activities and perform specific tasks, especially when facing adverse circumstances (Bandura, 1977<sup>[1]</sup>). PISA has traditionally asked students to judge their capabilities in specific content areas, such as mathematics or science. In 2018 PISA asked students about their general sense of efficacy, or competence, particularly in the face of adversity.

The other side of this coin is fear of failure, which is the tendency to avoid mistakes because they may be regarded as shameful and could signal a lack of innate ability and perhaps even an uncertain future (Atkinson, 1957<sup>[2]</sup>; Conroy, Willow and Metzler, 2002<sup>[3]</sup>). The level of fear is determined by the perceived risk of failure in a given activity or task, but also by the perceived (negative) consequences associated with failing (Lazarus, 1991<sup>[4]</sup>; Warr, 2000<sup>[5]</sup>).

Consequently, fear of failure and self-efficacy go hand-in-hand: students who believe they are not capable of performing adequately in certain situations are more likely to be fearful of such situations. Self-efficacy and fear of failure are also closely related to other concepts in educational psychology, some of which have already been examined in previous PISA cycles, such as achievement motivation, avoidance goals, anxiety and perfectionism.

How students judge their abilities, and how afraid they are of failing, can shape their feelings, motivation and behaviour (Bandura, 1991<sup>[6]</sup>). According to social cognitive theory, students are more likely to set challenging goals for themselves, try harder and persist longer when they believe they will succeed (Bandura, 1977<sup>[1]</sup>; Ozer and Bandura, 1990<sup>[7]</sup>). Conversely, students lacking self-confidence may wrongly assume that investing more effort in an activity is a waste of time, which, in a self-fulfilling prophecy, undermines any incentive to persevere, making success less likely (Bandura, 1999<sup>[8]</sup>; OECD, 2013<sup>[9]</sup>). Students with less self-efficacy may thus not reach their full potential, and thwart their own education and career aspirations (Bandura et al., 2001<sup>[10]</sup>; Wigfield and Eccles, 2000<sup>[11]</sup>).

### What the data tell us

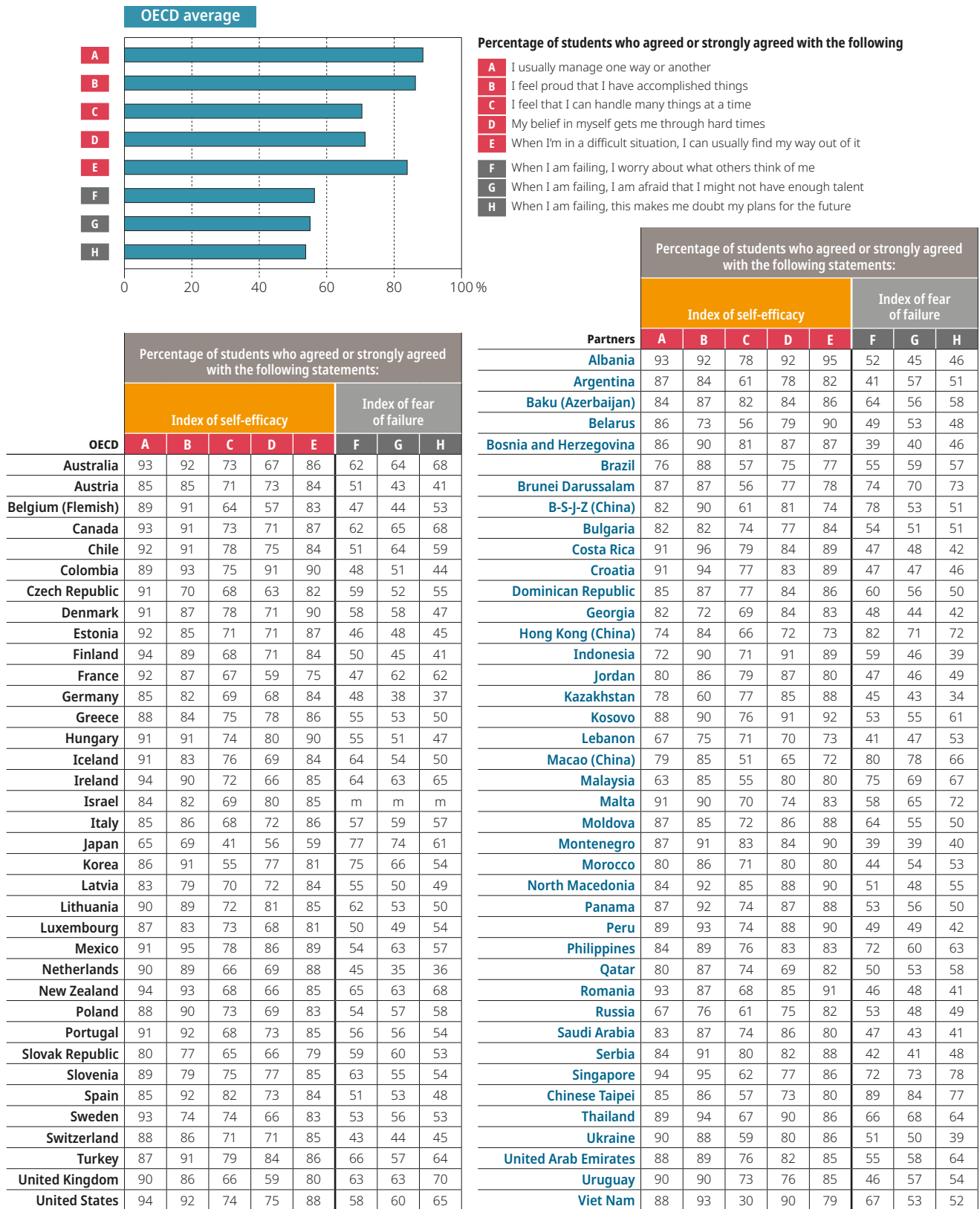
- On average across OECD countries, 84% of students agreed or strongly agreed that they can usually find a way out of difficult situations, and 56% agreed or strongly agreed that, when they fail, they worry about what others think about them.
- Students in many Asian countries and economies expressed the greatest fear of failure, while students in many European countries expressed the least fear.
- In every school system except Italy and the Netherlands, socio-economically advantaged students reported more self-confidence in their abilities than their disadvantaged peers.
- In almost every education system, girls expressed greater fear of failure than boys, and this gender gap was considerably wider amongst top-performing students.
- In a majority of school systems, students who expressed a greater fear of failure scored higher in reading and reported less satisfaction with life than students expressing less concern about failing, after accounting for the socio-economic profile of students and schools.

A rational and moderate sense of fear may urge students to expend greater effort on academic tasks. For instance, many students complete their homework because they are afraid of upsetting the teacher; others show good behaviour in class so they are not denied recess; yet others study for final exams to avoid repeating a grade. However, students who are overly concerned about failing often find it difficult to concentrate on a given activity because their minds are too busy trying to cope with the associated stress and anxiety (Ashcraft and Kirk, 2001<sup>[12]</sup>; Bandura, 1982<sup>[13]</sup>). These students also tend to avoid challenging situations that are essential for their personal growth (Heckhausen, 1975<sup>[14]</sup>; Kaye, Conroy and Fifer, 2008<sup>[15]</sup>). These avoidance behaviours, such as procrastinating, withholding effort and misbehaving, can result in students not performing in a given activity or task as would be expected (Beilock et al., 2004<sup>[16]</sup>; Kaye, Conroy and Fifer, 2008<sup>[15]</sup>; Martin, Marsh and Debus, 2003<sup>[17]</sup>).

Even if fear of failure could be used to improve student conduct and performance in certain situations, it would still be problematic, as it threatens the social and emotional well-being of students (Elliot and Sheldon, 1997<sup>[18]</sup>). Amongst other negative outcomes, fear of failure has been associated with stress, anxiety, burnout and depression (Conroy, 2001<sup>[19]</sup>; Gustafsson, Sagar and Stenling, 2017<sup>[20]</sup>; Sagar, Lavalley and Spray, 2007<sup>[21]</sup>). Previous studies have also shown that girls often experience greater fear of failure than boys do (Alkhazaleh and Mahasneh, 2016<sup>[22]</sup>; McGregor and Elliot, 2005<sup>[23]</sup>), and that girls' fear translates more easily into poorer learning outcomes in mathematics (Wach et al., 2015<sup>[24]</sup>).

Figure III.13.1 Student self-efficacy and fear of failure

Based on students' reports



Source: OECD, PISA 2018 Database, Tables III.B1.13.1 and III.B1.13.2.

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This chapter examines students' self-efficacy and fear of failure. PISA asked students to report the extent to which they agree ("strongly disagree", "disagree", "agree", "strongly agree") with the following statements about themselves: "I usually manage one way or another"; "I feel proud that I have accomplished things"; "I feel that I can handle many things at a time"; "My belief in myself gets me through hard times"; and "When I'm in a difficult situation, I can usually find my way out of it". These statements were combined to create the index of self-efficacy whose average is 0 and standard deviation is 1 across OECD countries. Positive values in this index mean that the student reported higher self-efficacy than the average student in OECD countries.<sup>1</sup>

Students were also asked to report the extent to which they agree ("strongly disagree", "disagree", "agree", "strongly agree") with the following statements about themselves: "When I am failing, I worry about what others think of me"; "When I am failing, I am afraid that I might not have enough talent"; and "When I am failing, this makes me doubt my plans for the future". These statements were combined to create the index of fear of failure whose average is 0 and standard deviation is 1 across OECD countries. Positive values in this index mean that the student reported a greater fear of failure than the average student in OECD countries.

### **HOW STUDENTS' SELF-EFFICACY AND FEAR OF FAILURE VARY ACROSS COUNTRIES, SCHOOLS AND STUDENTS**

The 15-year-olds who sat the PISA test expressed confidence in their ability to get things done, even when facing difficult situations (Figure III.13.1). For instance, on average across OECD countries, 89% of students agreed or strongly agreed that they usually manage one way or another; 86% agreed or strongly agreed that they feel proud when they accomplish things; and 84% agreed or strongly agreed that they can usually find a way out of difficult situations. However, fewer students agreed or strongly agreed that their belief in themselves gets them through hard times (71%) and that they can handle many things at a time (70%).

Interestingly, on average across OECD countries a majority of students expressed a fear of failure (Figure III.13.1). For instance, 56% of students agreed or strongly agreed that, when they fail, they worry about what others think about them; and 55% of students agreed or strongly agreed that, when they fail, they are afraid of not having enough talent. Even the percentages of students who strongly agreed with the three statements were sizeable. For instance, almost one in five students across OECD countries strongly agreed that failing makes them doubt about their plans for the future.

Students' self-efficacy varies considerably across countries and economies, and often in unexpected ways (Table III.B1.13.1). For instance, 15-year-old students in countries and economies whose average reading performance is below the OECD average, such as Albania, Baku (Azerbaijan), Costa Rica, the Dominican Republic, Kosovo, Mexico, Montenegro, the Republic of North Macedonia, Panama, Serbia, Turkey and the United Arab Emirates (Table I.B1.4), expressed more self-confidence in their general abilities than the average student across OECD countries. By contrast, many of the education systems where students reported the lowest self-efficacy were high performers, such as Hong Kong (China), Japan, Macao (China), Chinese Taipei and the United Kingdom.

Students in many Asian countries and economies expressed the greatest fear of failure while students in many European countries expressed the least fear (Figure III.13.1 and Table III.B1.13.2). For instance, 84% of students in Chinese Taipei agreed or strongly agreed that, when they fail, they are afraid of not having enough talent, whereas less than 40% of students in Bosnia and Herzegovina, Germany, Montenegro and the Netherlands reported so.

In every school system except Italy and the Netherlands, socio-economically advantaged students reported more self-confidence in their abilities than their disadvantaged peers (Figure III.13.2). And in almost every education system, and consistent with findings from previous studies, girls expressed greater fear of failure than boys, and markedly so in Canada, Denmark, Finland, Iceland, the Netherlands, Sweden and the United Kingdom. However, boys reported higher self-efficacy than girls in just over one in three school systems, while girls expressed more confidence in their general abilities than boys in just over one in four school systems. Moreover, in a majority of education systems, students with an immigrant background expressed similar levels of self-efficacy and fear of failure as those without an immigrant background.

In the analysis of schools, PISA finds that just under 2% of the variation in the indices of self-efficacy and fear of failure lie between schools, on average across OECD countries, which is a lower proportion than for the other indices analysed in this report (Tables III.B1.13.7 and III.B1.13.8). Students in socio-economically advantaged, city and private schools reported greater self-efficacy and fear of failure than students in disadvantaged, rural and public schools, respectively.

### **HOW STUDENTS' SELF-EFFICACY AND FEAR OF FAILURE ARE RELATED TO READING PERFORMANCE**

Greater self-efficacy is associated with stronger reading performance in a majority of countries and economies, even after accounting for the socio-economic profile of students and schools (as measured by the PISA index of economic, social and cultural status) (Figure III.13.3). Specifically, across OECD countries a one-unit increase in the index of self-efficacy was associated with an increase of six score points in the reading assessment, on average. The strongest positive associations between general self-efficacy and reading performance were observed largely in countries and economies whose average reading performance

was below the OECD average, whereas the weakest associations were observed often in education systems whose reading performance was at or above the OECD average. In Beijing, Shanghai, Jiangsu and Zhejiang (China) and Japan, students who expressed more self-confidence in their ability to succeed and accomplish tasks scored lower than students who expressed less self-confidence.


Figure III.13.2 Student self-efficacy and fear of failure, by student characteristics

Based on students' reports

|  |                        | Positive difference                       |    |    | Negative difference                                      |    |    | Difference is not significant                  |   |   | Missing values   |   |   |   |   |   |   |  |  |
|--|------------------------|---|----|----|--|----|----|--|---|---|--|---|---|---|---|---|---|--|--|
|  |                        | A   |    |    | B  |    |    | C  |   |   | C  |   |   |   |   |   |   |  |  |
|  |                        | Girls - boys                              |    |    | Advantaged - disadvantaged students                      |    |    | Immigrant - non-immigrant students             |   |   |  |   |   |   |   |   |   |  |  |
|  |                        | Difference in the index of self-efficacy: |    |    | Difference in the index of fear of failure: <sup>1</sup> |    |    | Difference in the index of self-efficacy:      |   |   | Difference in the index of fear of failure: <sup>1</sup> |   |   |   |   |   |   |  |  |
|  |                        | A   |    |    | B  |    |    | C  |   |   | A  |   |   | B |   |   | C |  |  |
|  | <b>Partners</b>        | A   | B  | C  | A  | B  | C  | A  | B | C | A  | B | C | A | B | C |   |  |  |
|  | Albania                |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Argentina              |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Baku (Azerbaijan)      |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Belarus                |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Bosnia and Herzegovina |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Brazil                 |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Brunei Darussalam      |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | B-5-J-Z (China)        |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Bulgaria               |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Costa Rica             |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Croatia                |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Dominican Republic     |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Georgia                |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Hong Kong (China)      |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Indonesia              |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Jordan                 |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Kazakhstan             |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Kosovo                 |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Lebanon                |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Macao (China)          |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Malaysia               |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Malta                  |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Moldova                |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Montenegro             |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Morocco                |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | North Macedonia        |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Panama                 |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Peru                   |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Philippines            |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Qatar                  |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Romania                |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Russia                 |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Saudi Arabia           |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Serbia                 |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Singapore              |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Chinese Taipei         |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Thailand               |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Ukraine                |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | United Arab Emirates   |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Uruguay                |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Viet Nam               |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | <b>OECD</b>            | A   | B  | C  | A  | B  | C  | A  | B | C | A  | B | C | A | B | C |   |  |  |
|  | <b>OECD average</b>    |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Australia              |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Austria                |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Belgium (Flemish)      |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Canada                 |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Chile                  |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Colombia               |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Czech Republic         |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Denmark                |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Estonia                |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Finland                |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | France                 |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Germany                |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Greece                 |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Hungary                |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Iceland                |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Ireland                |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Israel                 |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Italy                  |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Japan                  |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Korea                  |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Latvia                 |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Lithuania              |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Luxembourg             |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Mexico                 |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Netherlands            |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | New Zealand            |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Poland                 |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Portugal               |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Slovak Republic        |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Slovenia               |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Spain                  |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Sweden                 |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Switzerland            |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | Turkey                 |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | United Kingdom         |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  | United States          |   |    |    |  |    |    |  |   |   |  |   |   |   |   |   |   |  |  |
|  |                        | A   | B  | C  | A  | B  | C  |  |   |   |  |   |   |   |   |   |   |  |  |
|  |                        | 20  | 74 | 12 | 69   | 30 | 7  | Countries/economies with a positive difference |   |   |  |   |   |   |   |   |   |  |  |
|  |                        | 23  | 2  | 43 | 6  | 37 | 46 | Countries/economies with no difference         |   |   |  |   |   |   |   |   |   |  |  |
|  |                        | 33  | 0  | 15 | 1  | 9  | 16 | Countries/economies with a negative difference |   |   |  |   |   |   |   |   |   |  |  |

1. Higher values in the index indicate a greater fear of failure.

Source: OECD, PISA 2018 Database, Tables III.B1.13.5 and III.B1.13.6.

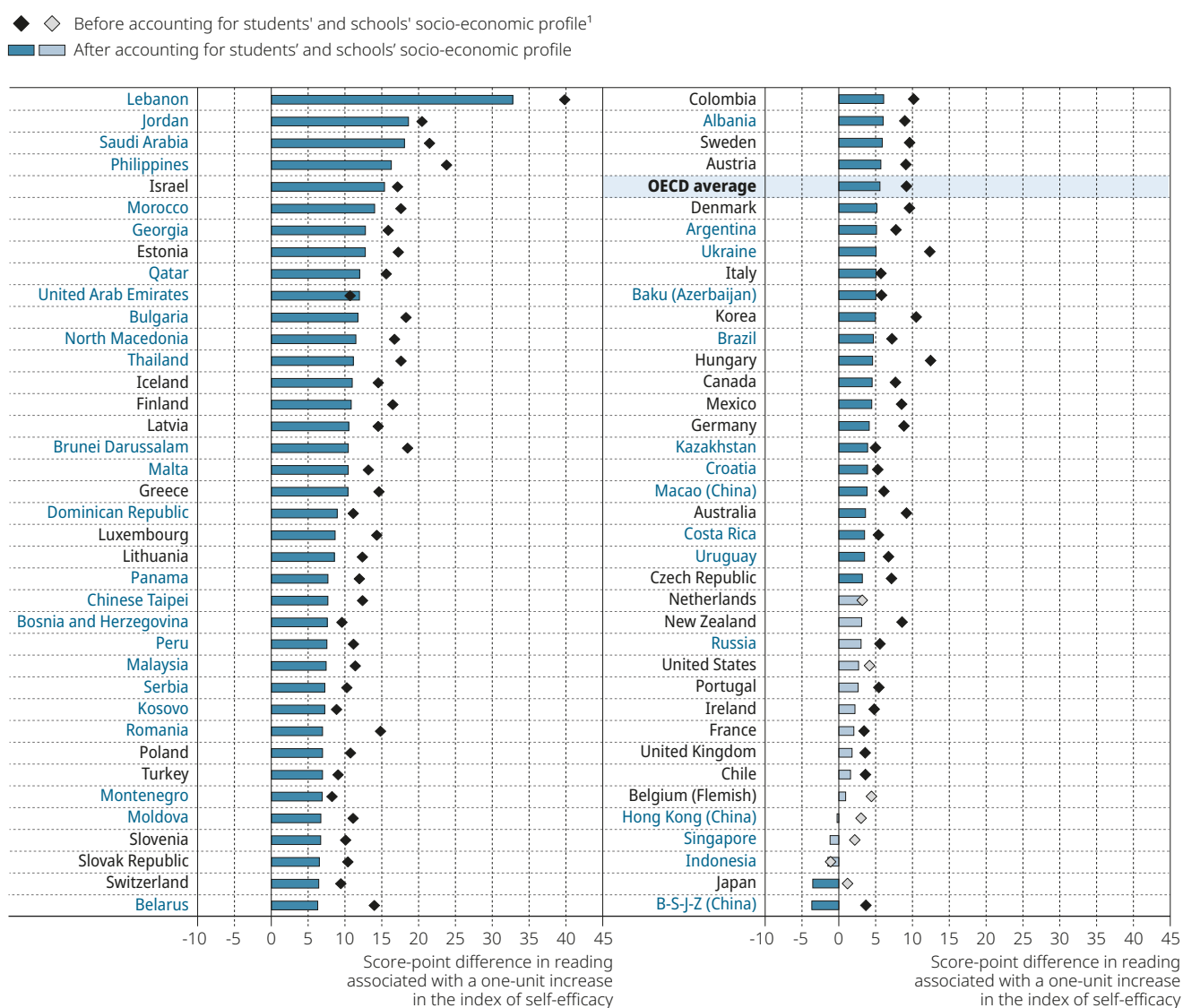
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## Students' self-efficacy and fear of failure

Perhaps more surprisingly, in a majority of school systems, students who expressed a greater fear of failure scored higher in reading than students expressing less concern about failing, after accounting for the socio-economic profile of students and schools (Table III.B1.13.10). Even after accounting for gender (remember that girls tended to express greater fear of failure and tended to perform better in reading) the relationship still holds in 35 out of 75 education systems. In this case, the strongest positive associations with reading performance were observed in many countries and economies whose reading performance was at or above the OECD average, whereas the weakest and negative associations were largely observed in education systems whose reading performance was below the OECD average.

Amongst the items that are components of the indices of self-efficacy and fear of failure, those that were more positively associated with reading performance were "I usually manage one way or another" and "I feel proud that I have accomplished things", on average across OECD countries and after accounting for students' and schools' socio-economic profile. By contrast, students who agreed with the statement "When I am failing, this makes me doubt my plans for the future" scored similarly in reading to those who disagreed with the statement (a difference of one score point, after accounting for socio-economic status).

Figure III.13.3 **Student self-efficacy and reading performance**



1. The socio-economic profile is measured by the PISA index of economic, social and cultural status (ESCS).

**Note:** Statistically significant values are shown in darker tones (see Annex A3).

Countries and economies are ranked in descending order of the score-point difference associated with the index of self-efficacy, after accounting for students' and schools' socio-economic profile.

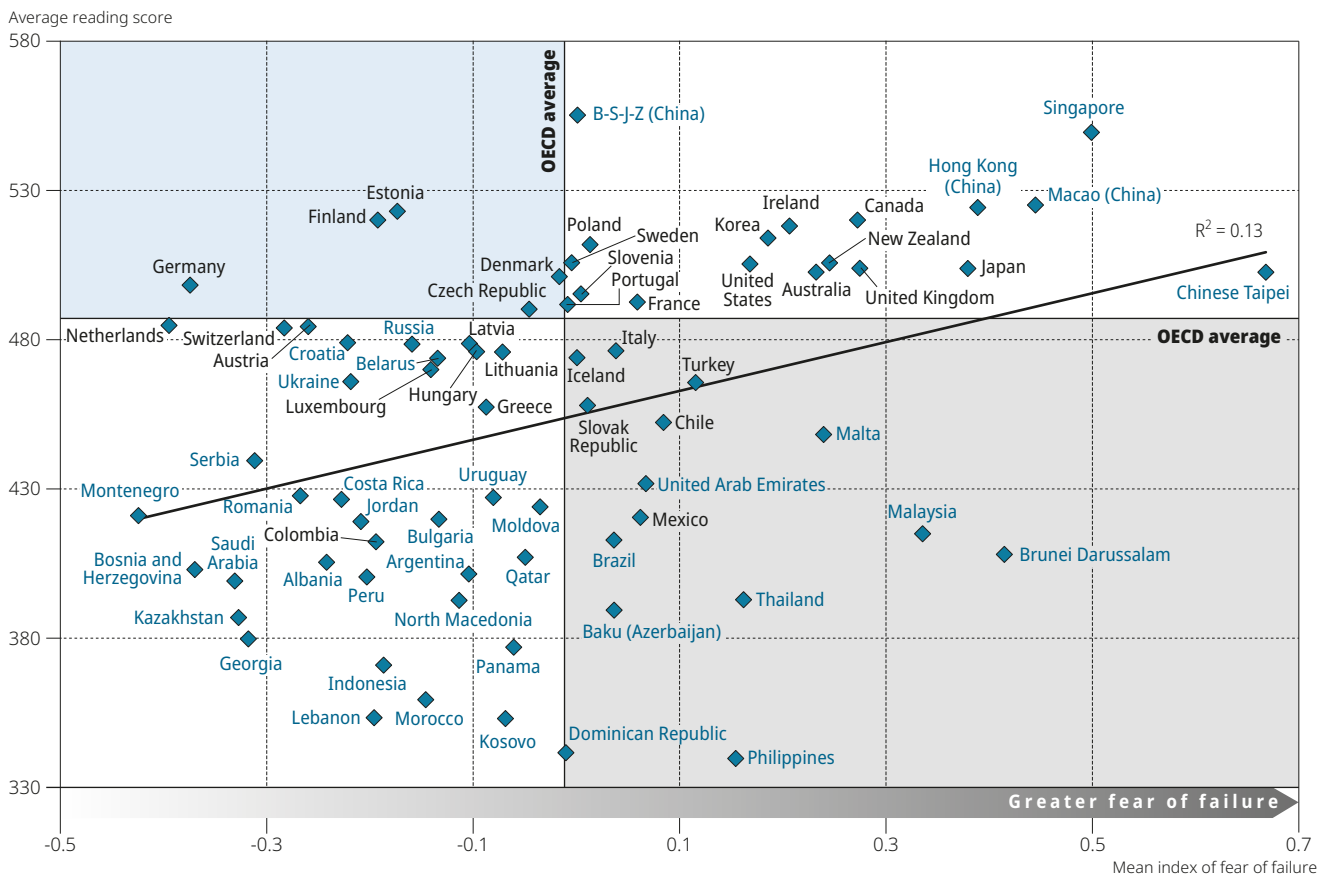
**Source:** OECD, PISA 2018 Database, Table III.B1.13.9.

**StatLink** <http://dx.doi.org/10.1787/888934030629>

Moreover, students who agreed that their belief in themselves gets them through hard times scored considerably lower (a difference of 11 score points) than students who disagreed with the statement, probably because the students who agreed with this statement were implicitly admitting that they often go through "hard times".

At the system level, the greater the fear of failure expressed by students, the higher the reading scores in that education system, on average (Figure III.13.4). However, many countries and economies did not conform to this observed pattern. For instance, in Estonia, Finland and, to a lesser extent, in Germany, students expressed less fear of failure than the typical OECD student, but scored above the OECD average in reading. By contrast, in Brunei Darussalam, Malaysia, Malta, the Philippines and Thailand, students expressed more fear of failure than the typical OECD student, but their reading scores were below the OECD average. Interestingly, a large number of English-speaking and East Asian education systems were amongst those whose students were both more likely to report a fear of failure and to be high performers in reading.

Figure III.13.4 **Fear of failure and average reading performance**



Source: OECD, PISA 2018 Database, Tables III.B1.13.2 and I.B1.4.  
 StatLink <http://dx.doi.org/10.1787/888934030648>

**IS FEAR OF FAILURE A BETTER PREDICTOR OF ACADEMIC PERFORMANCE AMONGST GIRLS THAN AMONGST BOYS?**

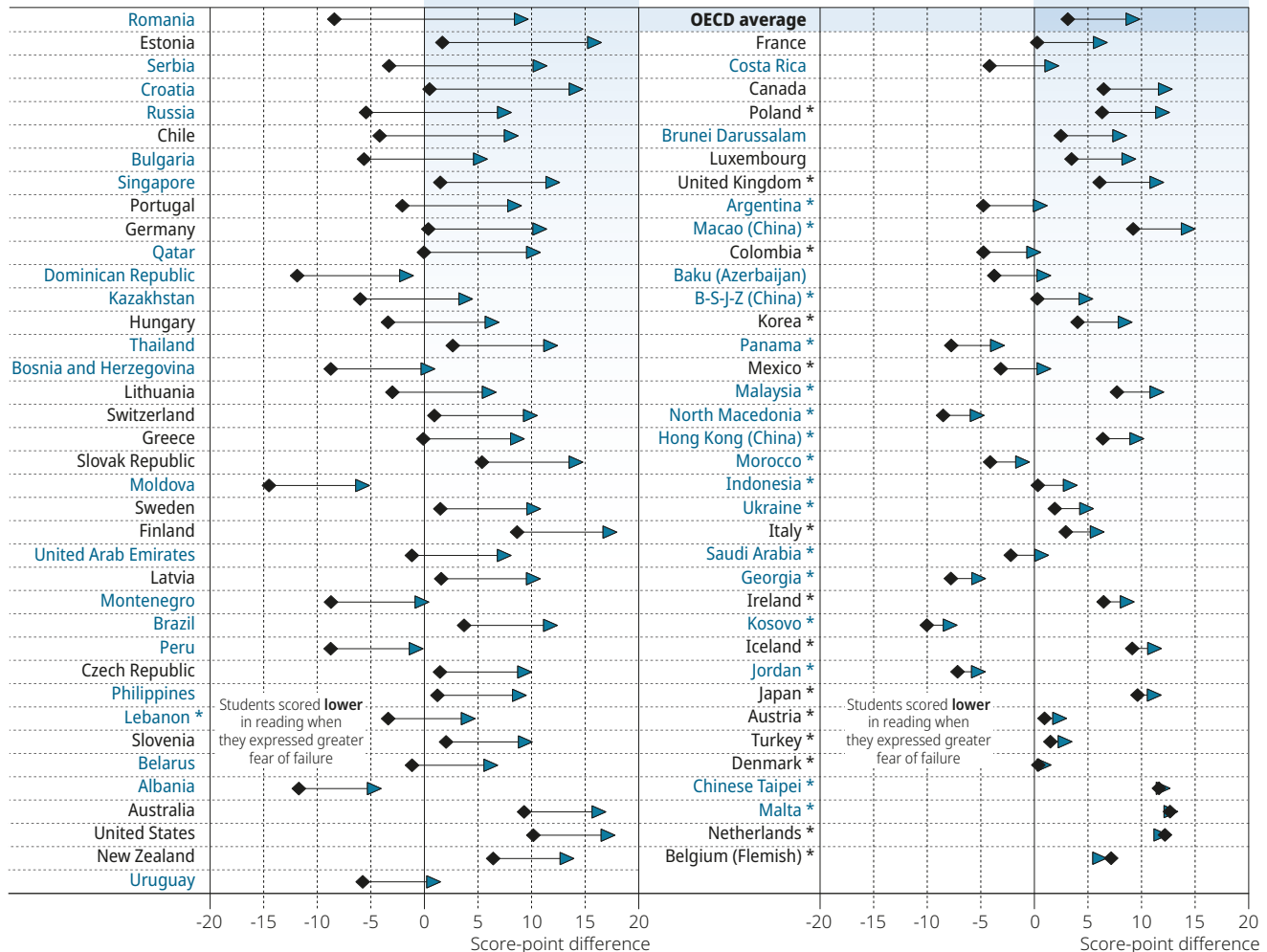
In virtually every country and economy, girls expressed a greater fear of failure than boys did (Figure III.13.2) and, on average across OECD countries, the gender gap in the index of fear of failure was the largest amongst all the indices analysed in this report. This is not the only way in which fear of failure acts differently amongst boys and girls: fear of failure is a much better predictor of academic performance amongst girls than amongst boys. In the reading assessment, for instance, girls scored nine points higher for every one-unit increase in the index of fear of failure, on average across OECD countries and after accounting for students' socio-economic status and the index of self-efficacy, whereas boys scored only three points higher (Figure III.13.5). A gender gap, in favour of girls, in the association between fear of failure and reading performance was observed in a majority of school systems, particularly in Chile, Croatia, Estonia, Romania, the Russian Federation and Serbia.

Figure III.13.5 Association between fear of failure and reading performance, by gender

Based on students' reports

Change in reading performance associated with a one-unit increase in the index of fear of failure<sup>1</sup> amongst:

◆ Boys ▶ Girls



1. Higher values in the index indicate a greater fear of failure.

**Notes:** Countries and economies where the difference between boys and girls is not statistically significant are marked with an asterisk (see Annex A3).

The results are based on linear regression analysis, after accounting students' socio-economic profile and the index of self-efficacy. The socio-economic profile is measured by the PISA index of economic, social and cultural status (ESCS).

Countries and economies are ranked in descending order of the difference between girls and boys.

**Source:** OECD, PISA 2018 Database, Table III.B1.13.13.

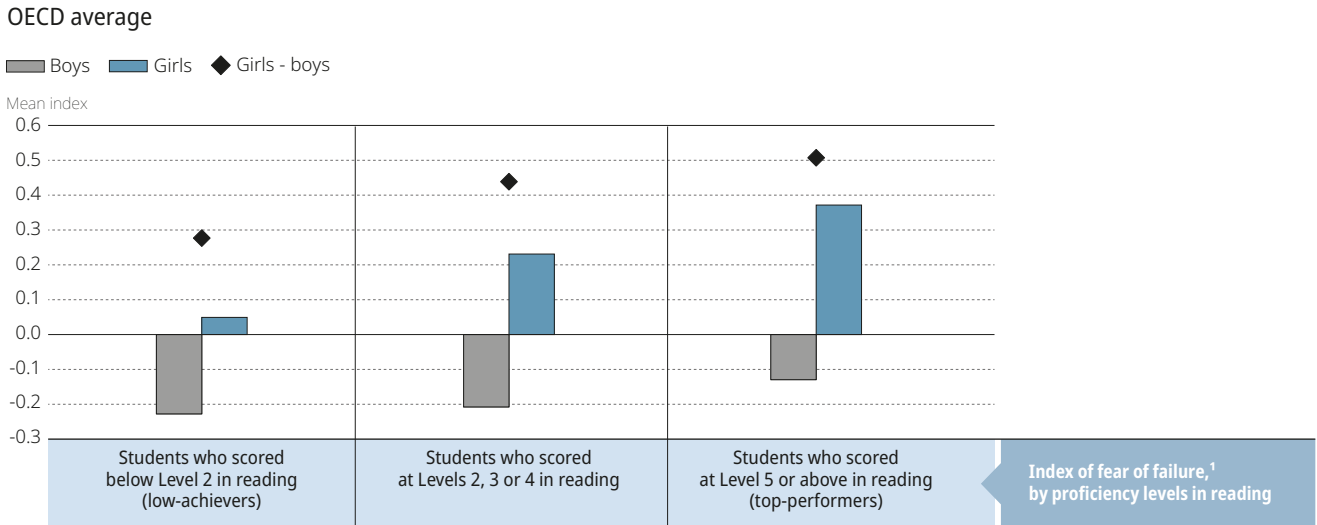
**StatLink** <http://dx.doi.org/10.1787/888934030686>

Similar results were observed in relation to mathematics and science performance (Table III.B1.13.13). While girls who expressed a greater fear of failure scored considerably higher in mathematics and science than girls who expressed less fear of failure (differences of five and eight points, respectively, per one-unit increase in the index of fear of failure), boys who expressed a greater fear of failure scored only marginally higher in the two subjects than boys who expressed less fear of failure (a difference of one point in mathematics and two points in science). In 21 countries and economies, boys scored lower in mathematics when they expressed greater fear of failure, while in only 5 countries and economies did girls who expressed a greater fear of failure score lower in mathematics. Overall, these results suggest that girls generally expressed a greater fear of failure than boys did, and that this gender gap was considerably wider amongst top-performing students, as shown in Figure III.13.6. More precisely, amongst low achievers in reading (those scoring below Level 2), the gender gap, in favour of girls, in the index of fear of failure was about 0.3 of a unit; amongst top-performing students (those scoring at Level 5 or above) the gender gap was 0.5 of a unit.



Interestingly, the relationship between the index of self-efficacy and performance was, on average across OECD countries, almost identical amongst boys and girls, and across subjects (Table III.B1.13.13). Regardless of the subject and gender examined, test scores always rose between six and seven points for every one-unit increase in the index of self-efficacy. The results across countries were also more stable than for the index of fear of failure. The index of self-efficacy and test scores were positively associated in a majority of school systems across the three subjects and amongst both boys and girls. The only country where a negative relationship between self-efficacy and test performance was observed was Japan (only for boys' scores in reading and science).

Figure III.13.6 **Fear of failure, by proficiency levels in reading and gender**



1. Higher values in the index indicate a greater fear of failure.

Note: All differences between girls and boys are statistically significant (see Annex A3).

Source: OECD, PISA 2018 Database, Table III.B1.13.14.

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### ARE STUDENTS WHO EXPRESSED A GREATER FEAR OF FAILURE LESS SATISFIED WITH THEIR LIVES?

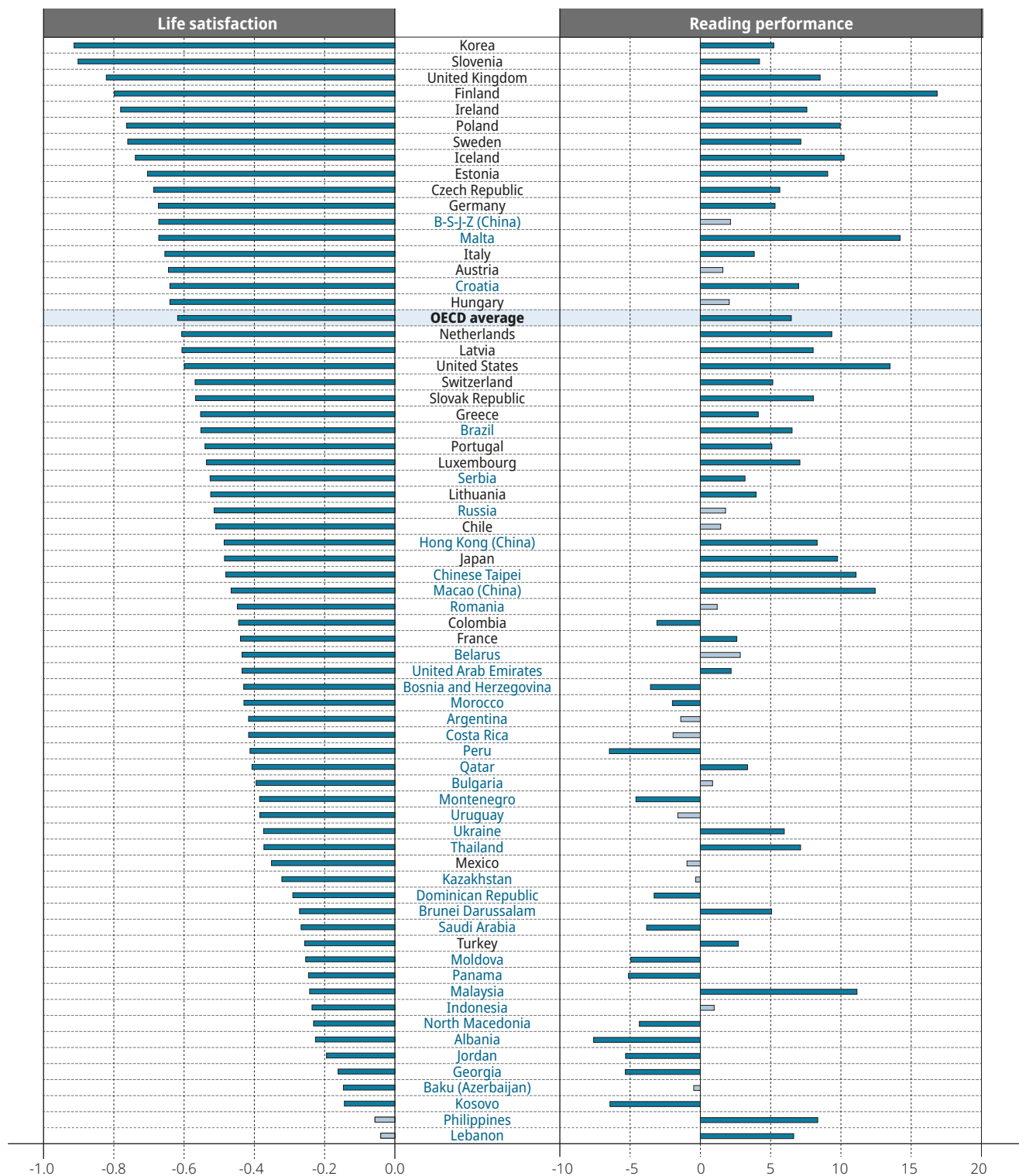
In the introduction to this chapter, it was suggested that a moderate fear of failure may prompt students to expend greater effort on academic tasks, and could therefore help improve their performance – a hypothesis that is in line with the results described in the preceding section. However, previous studies have also pointed out that a greater fear of failure may threaten an individual's social and emotional well-being (Elliot and Sheldon, 1997<sup>[18]</sup>; Gustafsson, Sagar and Stenling, 2017<sup>[20]</sup>). Do PISA 2018 results show that a greater fear of failure is negatively associated with life satisfaction?

PISA 2018 asked students to rate their satisfaction with life on a scale from 0 to 10, where 0 indicates the least satisfaction with life and 10 indicates the greatest satisfaction with life. In 69 out of 71 school systems, students reported less satisfaction with life when they expressed a greater fear of failure, after accounting for students' and schools' socio-economic profile (Table III.B1.13.15). The countries with the strongest negative associations were Estonia, Finland, Iceland, Ireland, Korea, Poland, Slovenia, Sweden and the United Kingdom, all OECD countries, while the only countries where the negative association was not significant were Lebanon and the Philippines. Figure III.13.7 shows that in 37 out of 68 education systems with available data, fear of failure is both positively associated with reading performance and negatively associated with life satisfaction.

Do PISA 2018 results show any gender disparities in the negative association between fear of failure and life satisfaction? Table III.B1.13.15 reveals that, in a clear majority of countries and economies, the negative relationship between fear of failure and life satisfaction was stronger amongst girls than amongst boys. In Korea, for instance, a one-unit increase in the index of fear or failure was associated with a decrease in the life-satisfaction scale of about 0.7 of a point amongst 15-year-old boys and of around one point amongst girls.

Figure III.13.7 How fear of failure is related to reading performance and life satisfaction

Change associated with a one-unit increase in the index of fear of failure<sup>1</sup>



1. Higher values in the index indicate a greater fear of failure.

**Notes:** Statistically significant values are shown in darker tones (see Annex A3).

The results are based on linear regression analysis, after accounting for students' and schools' socio-economic profile. The socio-economic profile is measured by the PISA index of economic, social and cultural status (ESCS).

Countries and economies are ranked in ascending order of the change in the index of life satisfaction associated with a one-unit increase in the index of fear of failure.

**Source:** OECD, PISA 2018 Database, Tables III.B1.13.10 and III.B1.13.15.

**StatLink** <http://dx.doi.org/10.1787/888934030667>

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## Note

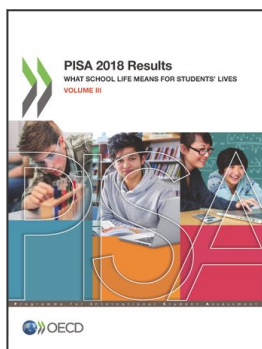
1. While the term general self-efficacy is used widely amongst researchers and practitioners in the field of education, Bandura has argued that there is no such thing as an "all-purpose measure of perceived self-efficacy" as self-efficacy encompasses the capacity to perform well-defined tasks (Bandura, 2006<sub>[25]</sub>).

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