



Science teachers' satisfaction: Evidence from the PISA 2015 teacher survey

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The PISA 2015 teacher survey

- **In 2015, over half a million students participated in the PISA assessment**
 - representing 28 million 15-year-olds in 72 countries/economies
- **In 9 OECD countries and 10 partner countries and economies, teachers filled out the teacher questionnaire**
- **Teachers were defined as those eligible to teach, have taught, are teaching, or will be teaching the modal grade**
- **Teachers randomly sampled into two populations: science and non-science teachers**
 - In total, 32 071 science teachers and 62 765 non-science teachers were surveyed

Country participation

OECD

- Australia
- Chile
- Czech Republic
- Germany
- Italy
- Korea
- Portugal
- Spain
- United States

Partners

- Brazil
- B-S-J-G (China)
- Colombia
- Dominican Republic
- Hong Kong (China)
- Macao (China)
- Peru
- Chinese Taipei
- United Arab Emirates
- Malaysia*

Why teacher satisfaction?

- Many countries and economies around the world are **struggling to attract and retain teachers**
- Inadequate teacher supply was blamed for the shortage of qualified science teachers
- In reality, retention was the

**Why are
teachers
quitting their
jobs?**

Teacher satisfaction measures in PISA 2015

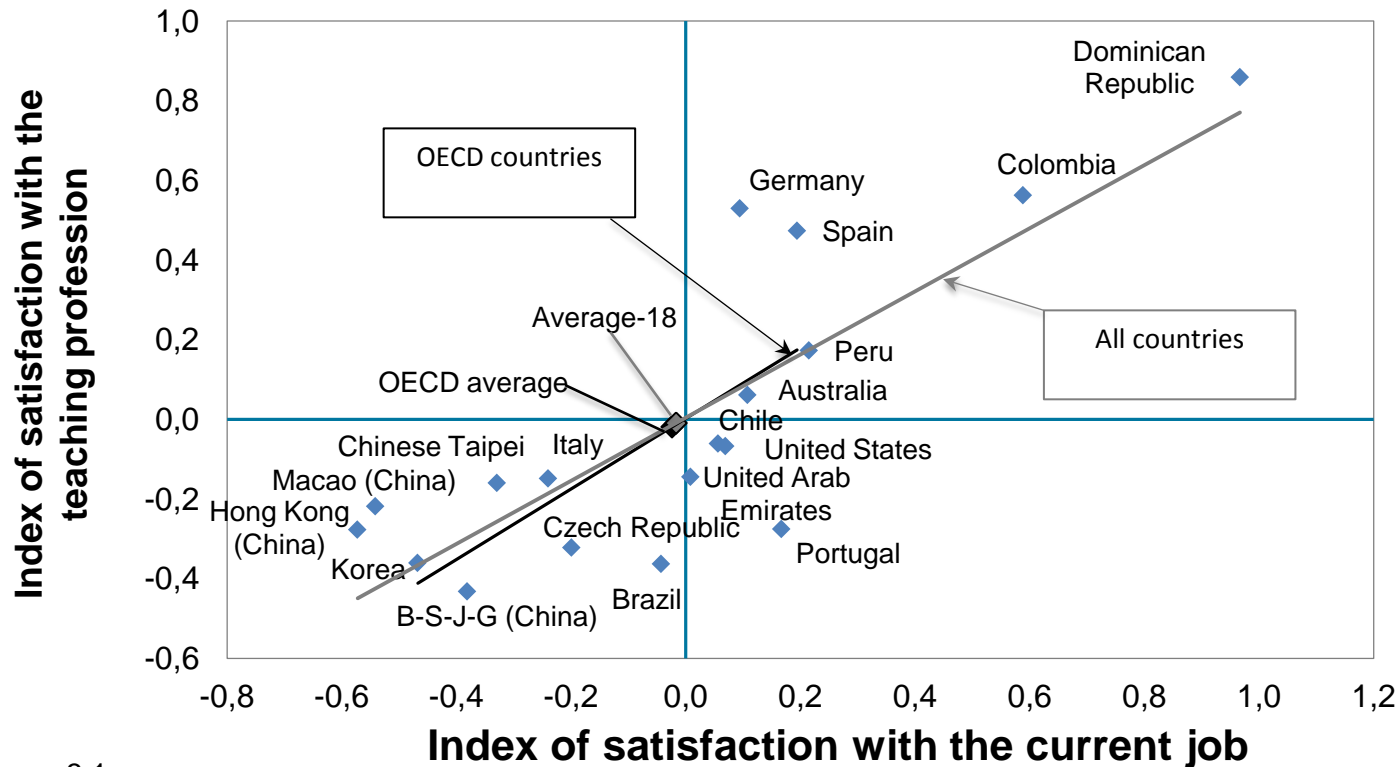
Satisfaction with the teaching profession

- The advantages of being a teacher clearly outweigh the disadvantages
- If I could decide again, I would still choose to work as a teacher.
- I regret that I decided to become a teacher
- I wonder whether it would have been better to choose another profession

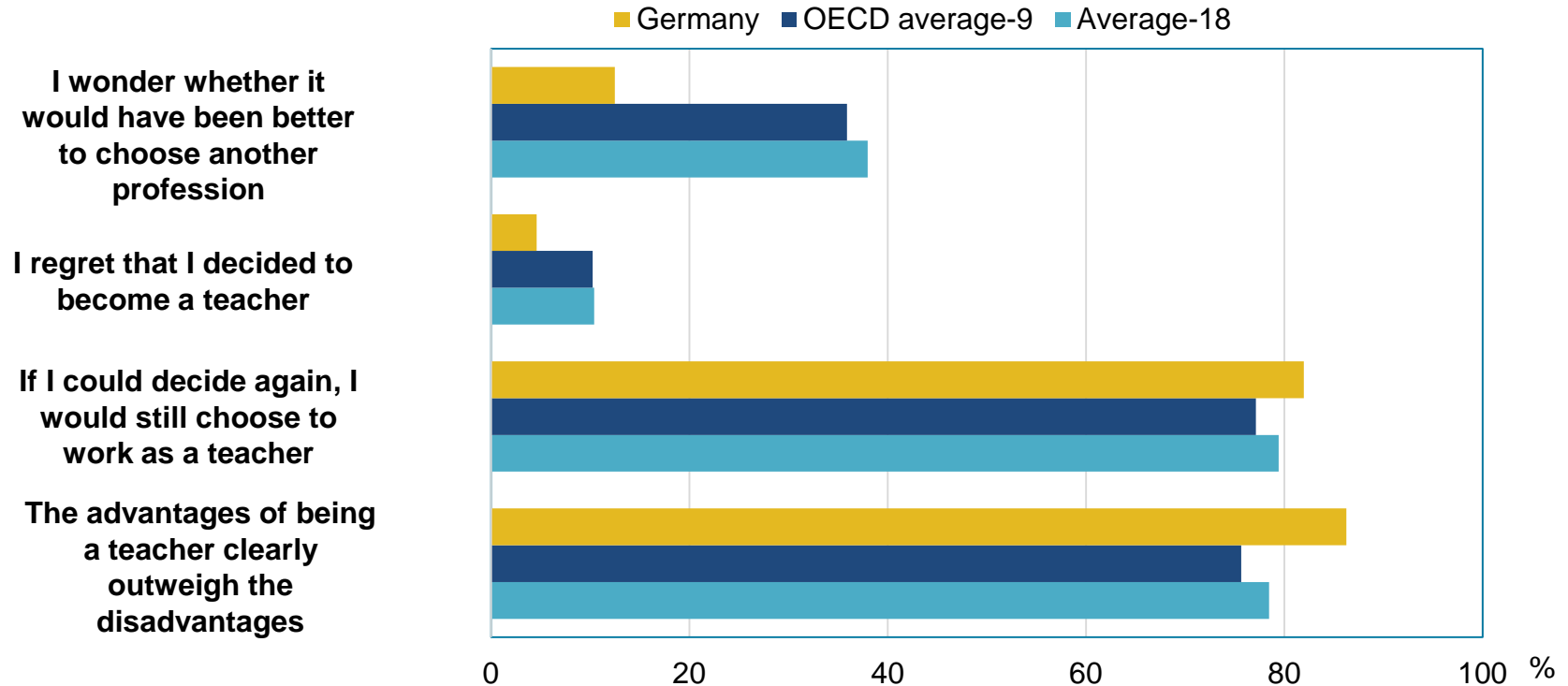
Satisfaction with the current job

- I enjoy working at this school
- I would recommend my school as a good place to work
- I am satisfied with my performance in this school.
- All in all, I am satisfied with my job

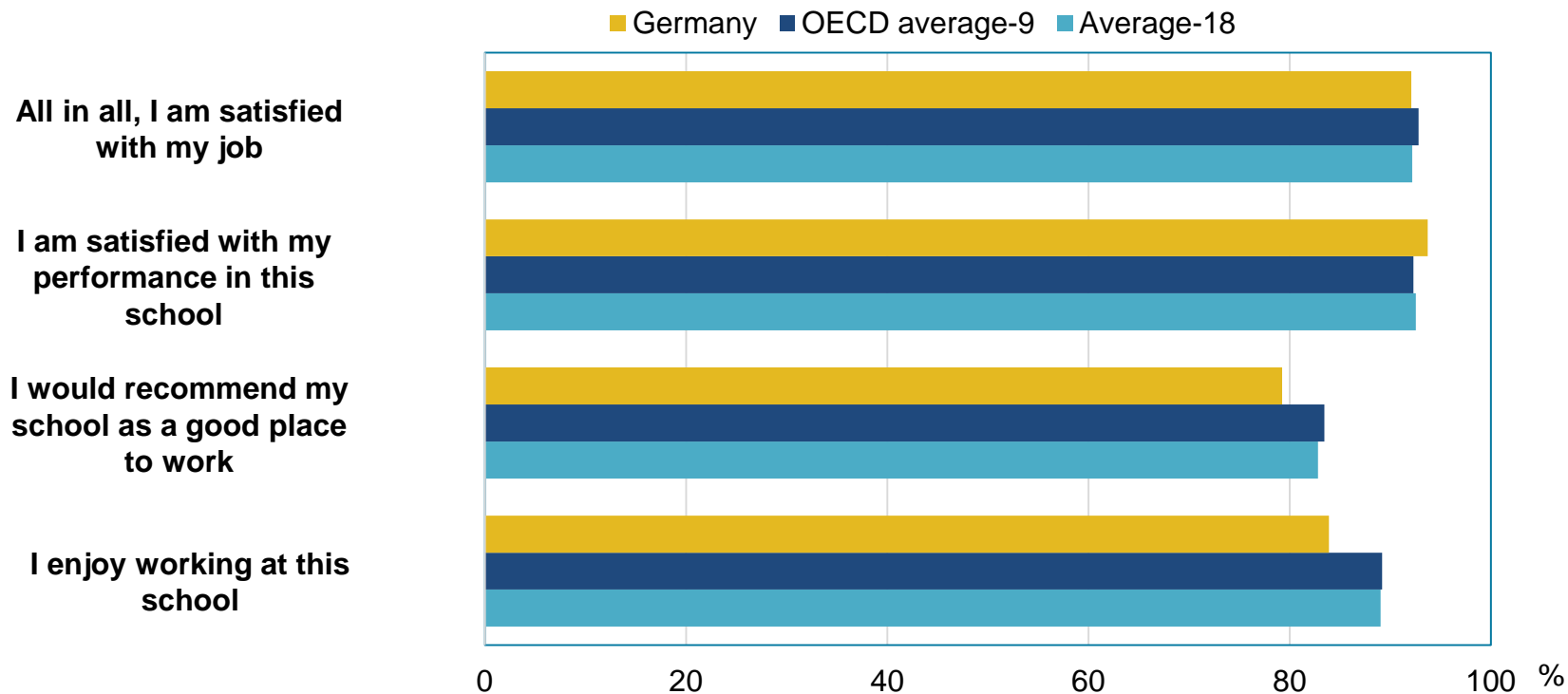
Relationship between the indices of satisfaction with the teaching profession and with the current job



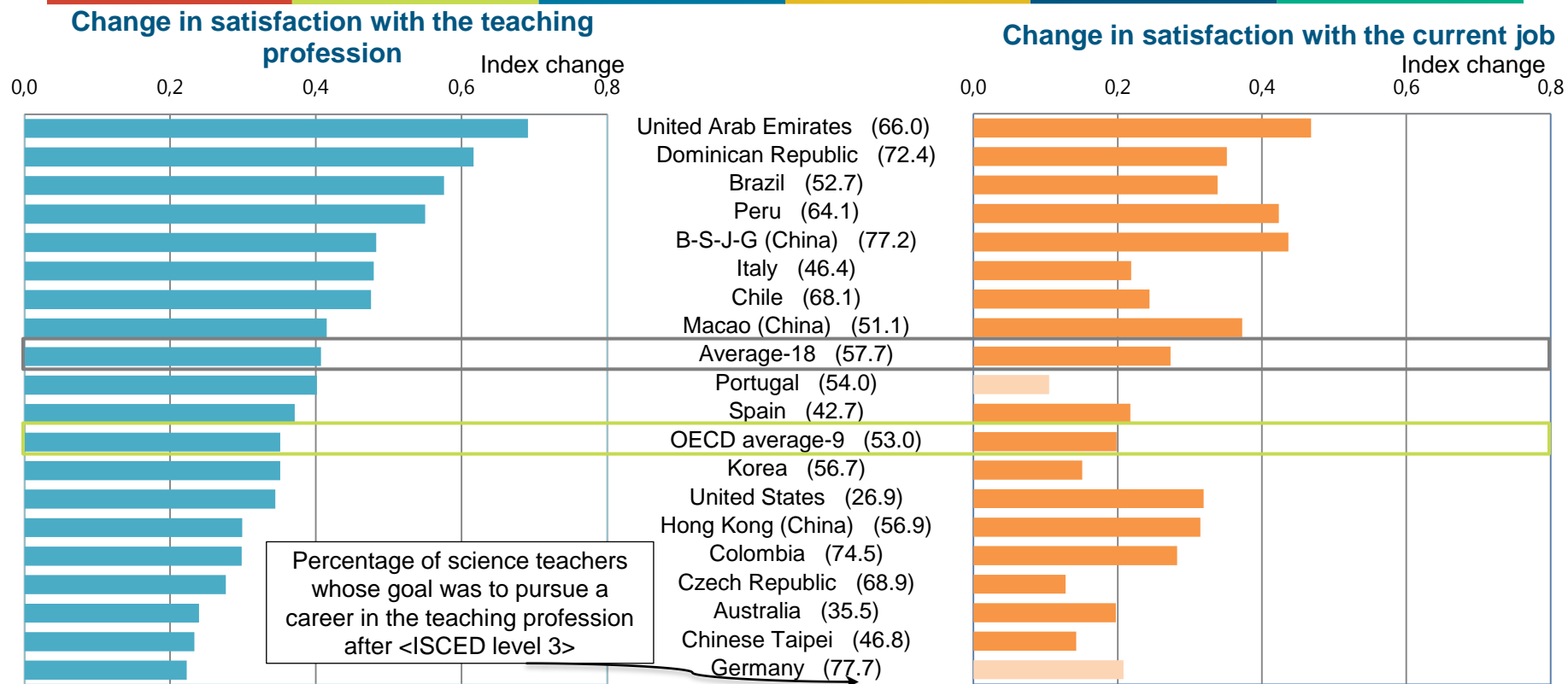
Satisfaction with the teaching profession



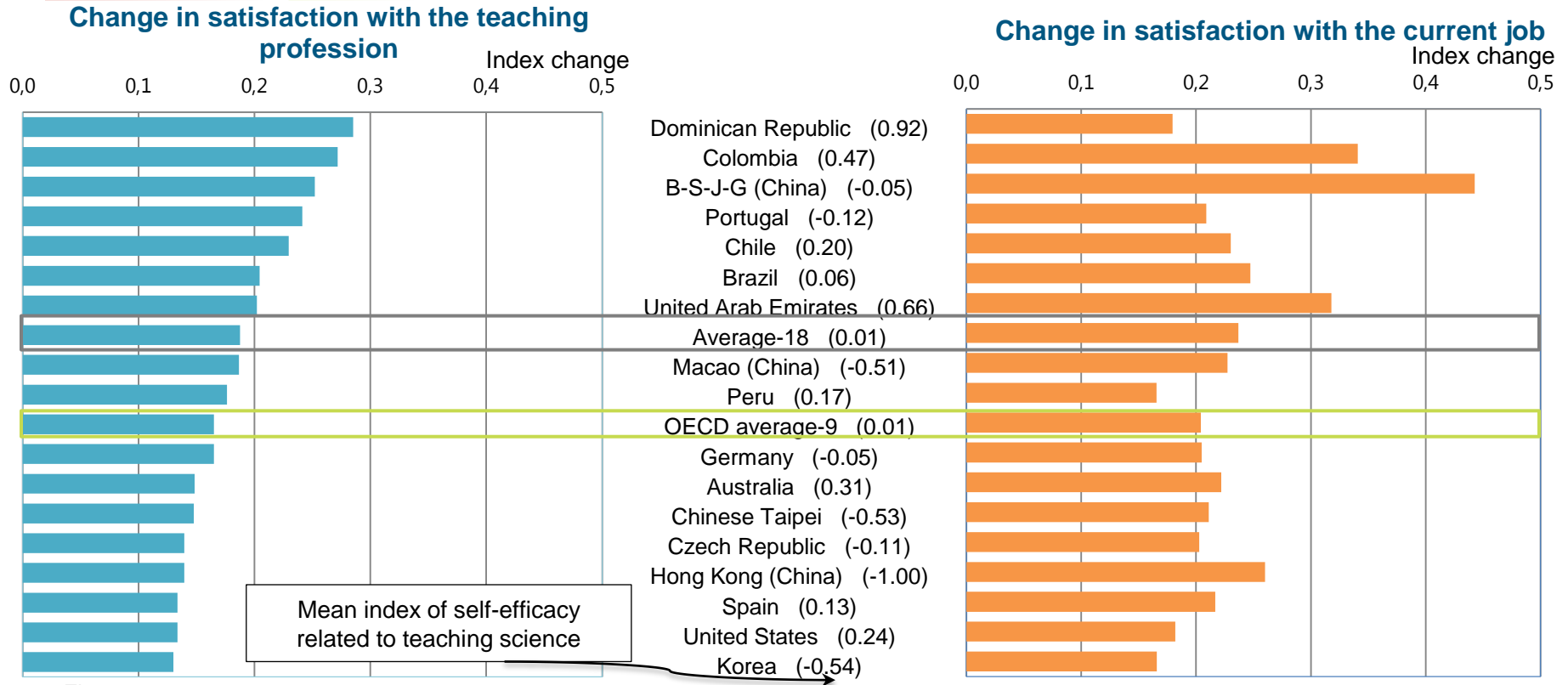
Satisfaction with the current job



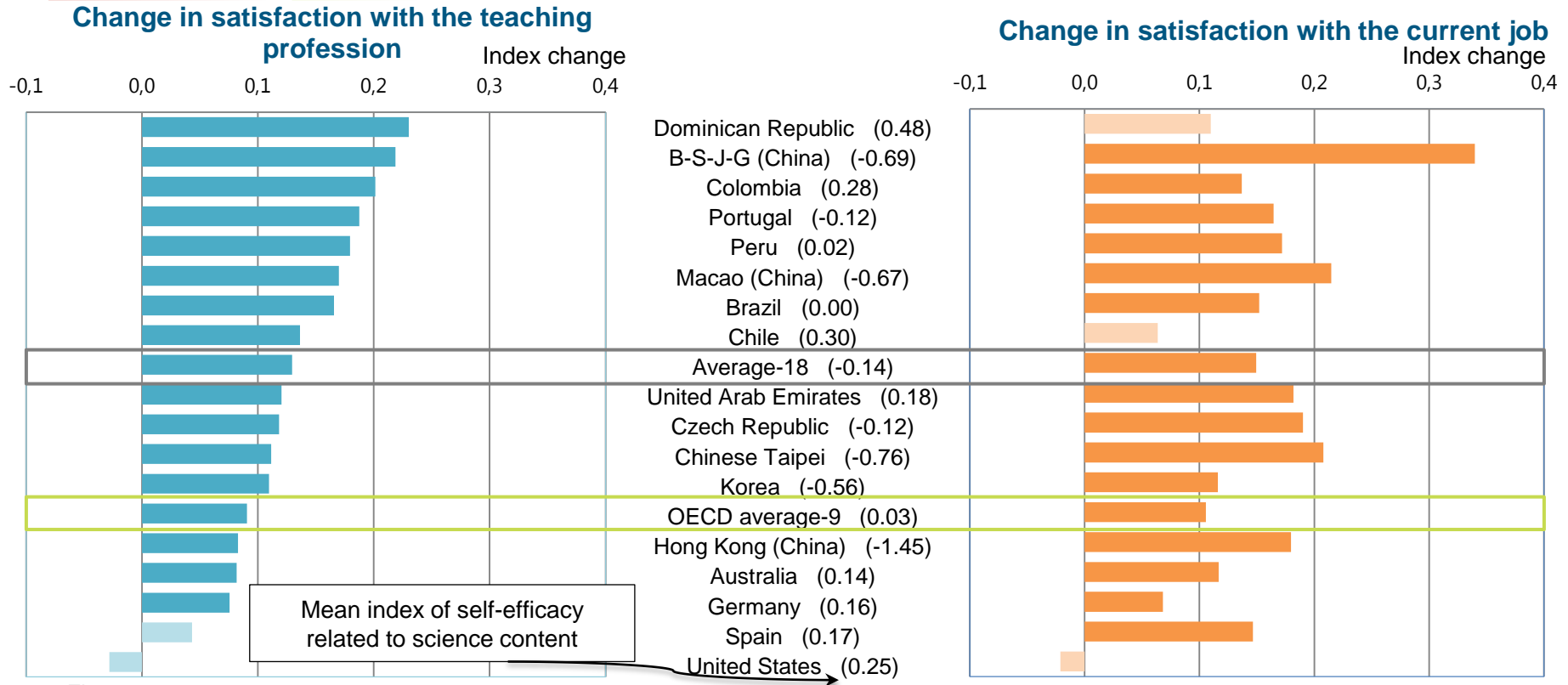
Teachers who were motivated to pursue a career in the teaching profession tend to be more satisfied



Self-efficacy in teaching science boosts teacher satisfaction



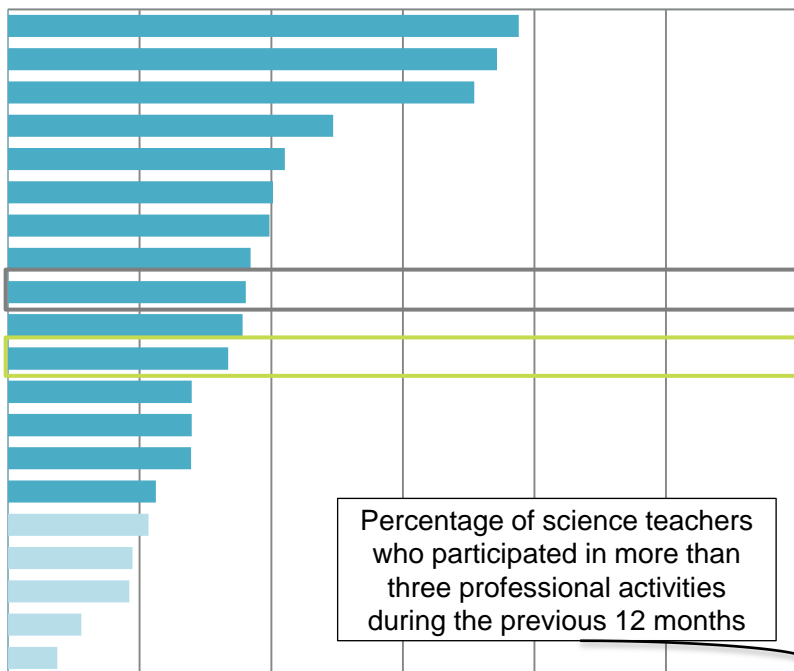
Self-efficacy with science content also enhances teacher satisfaction



Participation in more than three professional development activities boosts teacher satisfaction

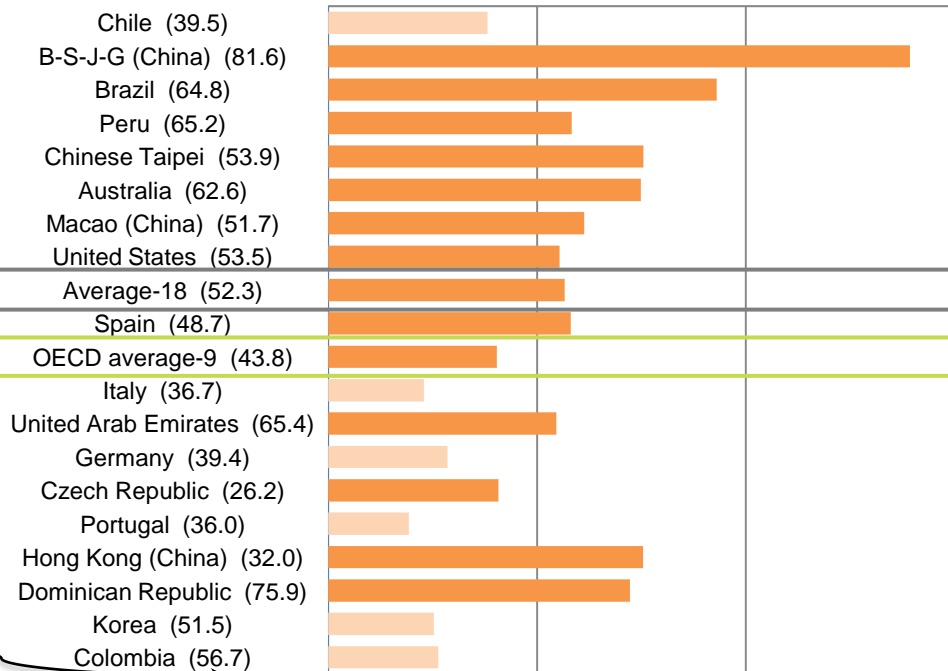
Change in satisfaction with the teaching profession

Index change
0,0 0,1 0,2 0,3 0,4 0,5 0,6



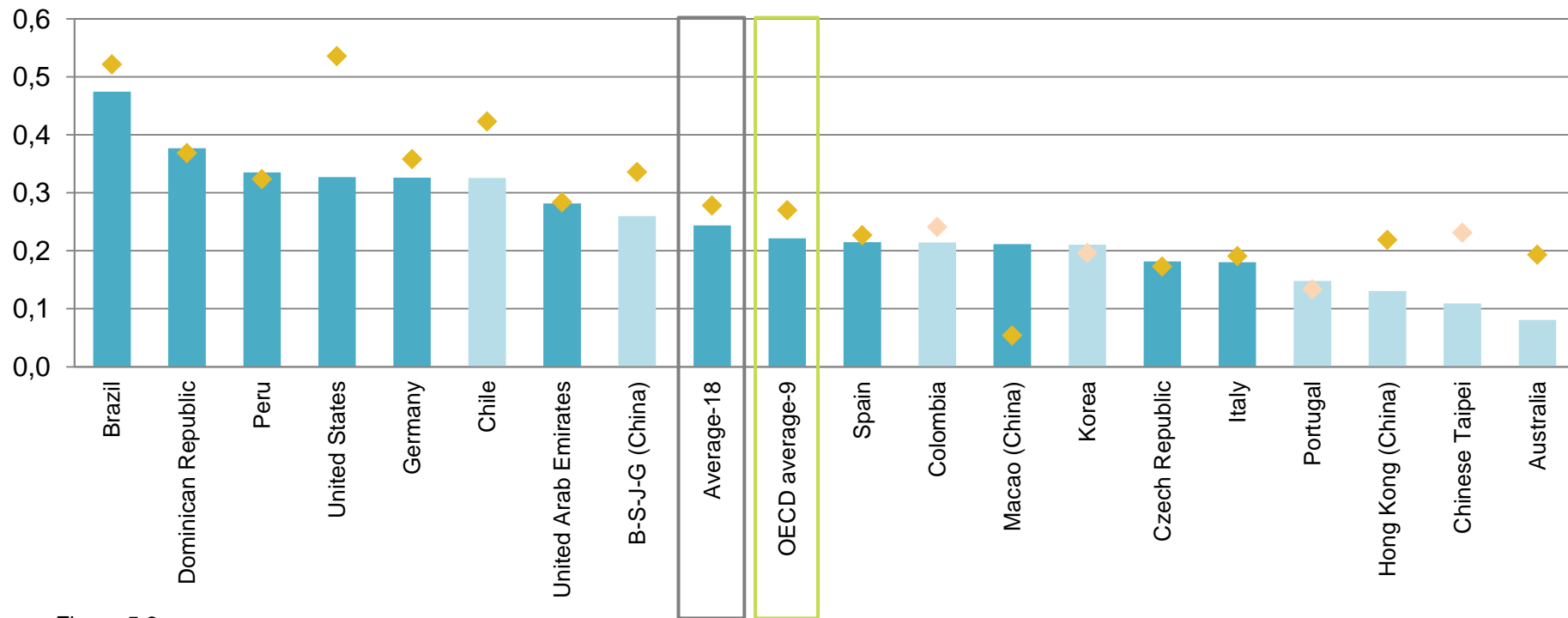
Change in satisfaction with the current job

Index change
0,0 0,2 0,4 0,6

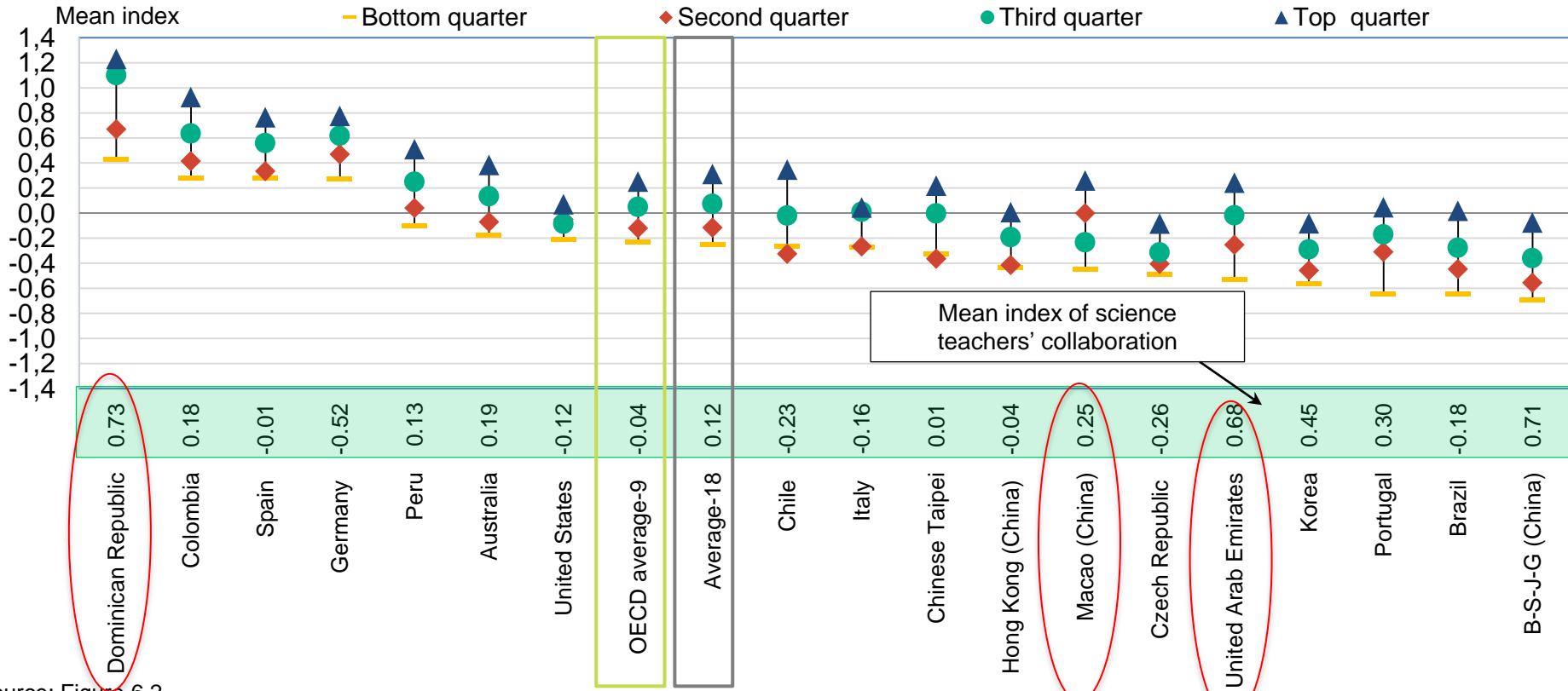


A positive disciplinary climate in the school helps improve teachers' satisfaction with the current job

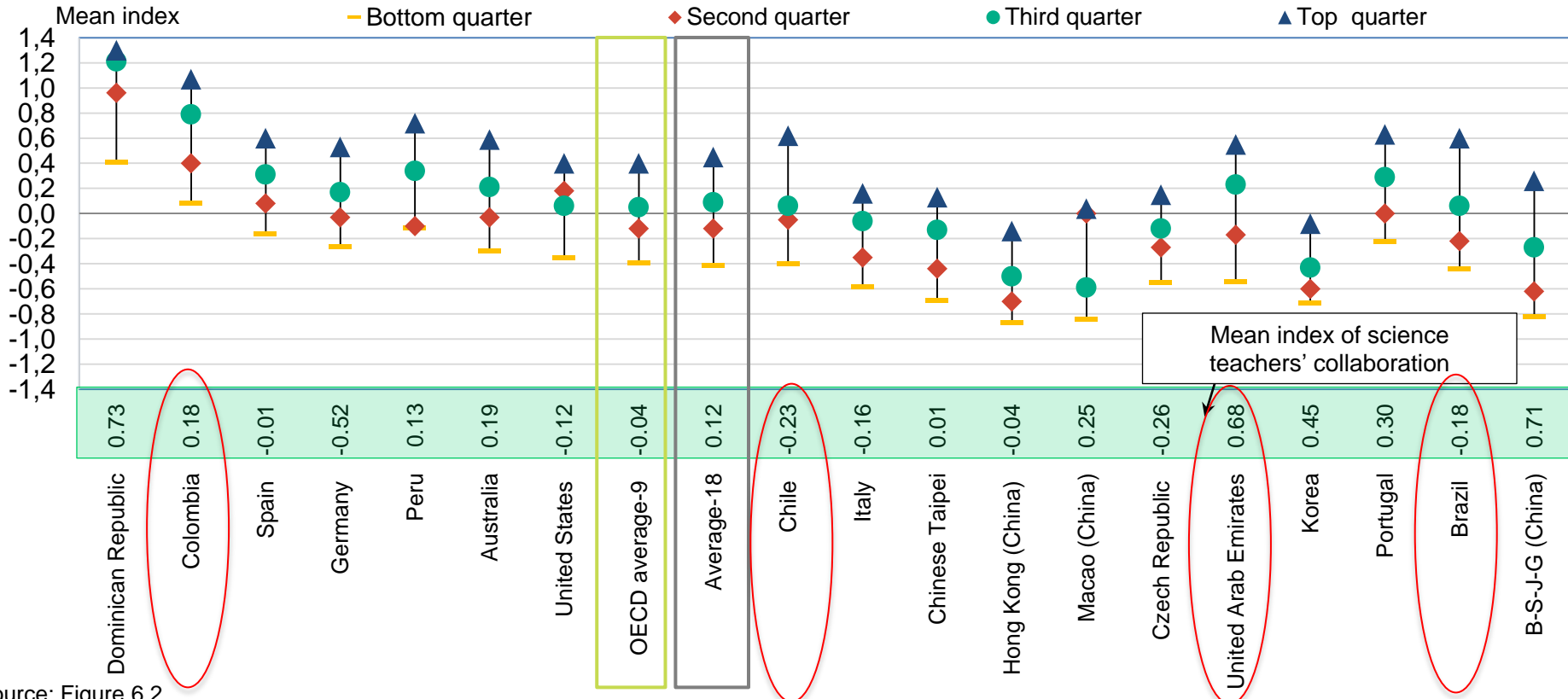
Index change ■ After accounting for science teachers' demographic profile ◆ Before accounting for science teachers' demographic profile



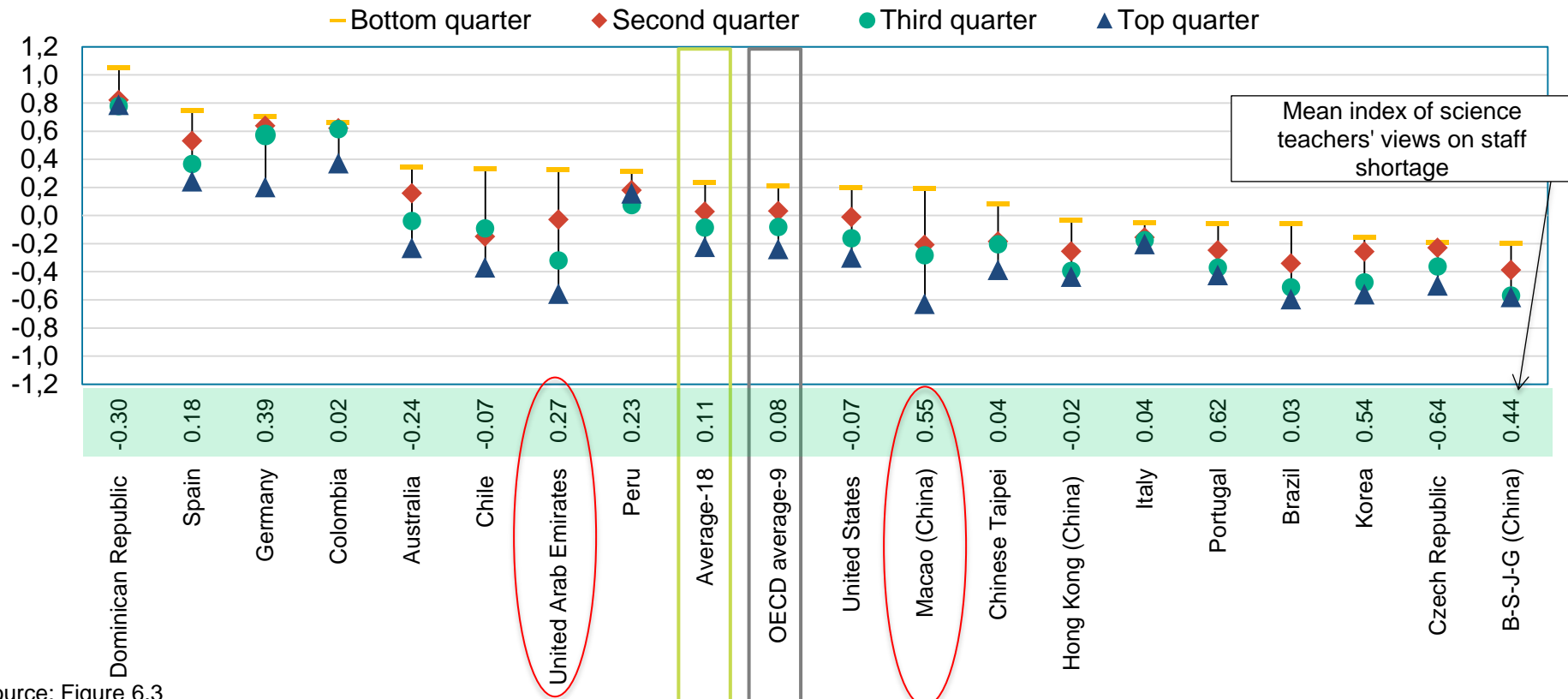
Teachers who collaborate with colleagues are more satisfied with the teaching profession



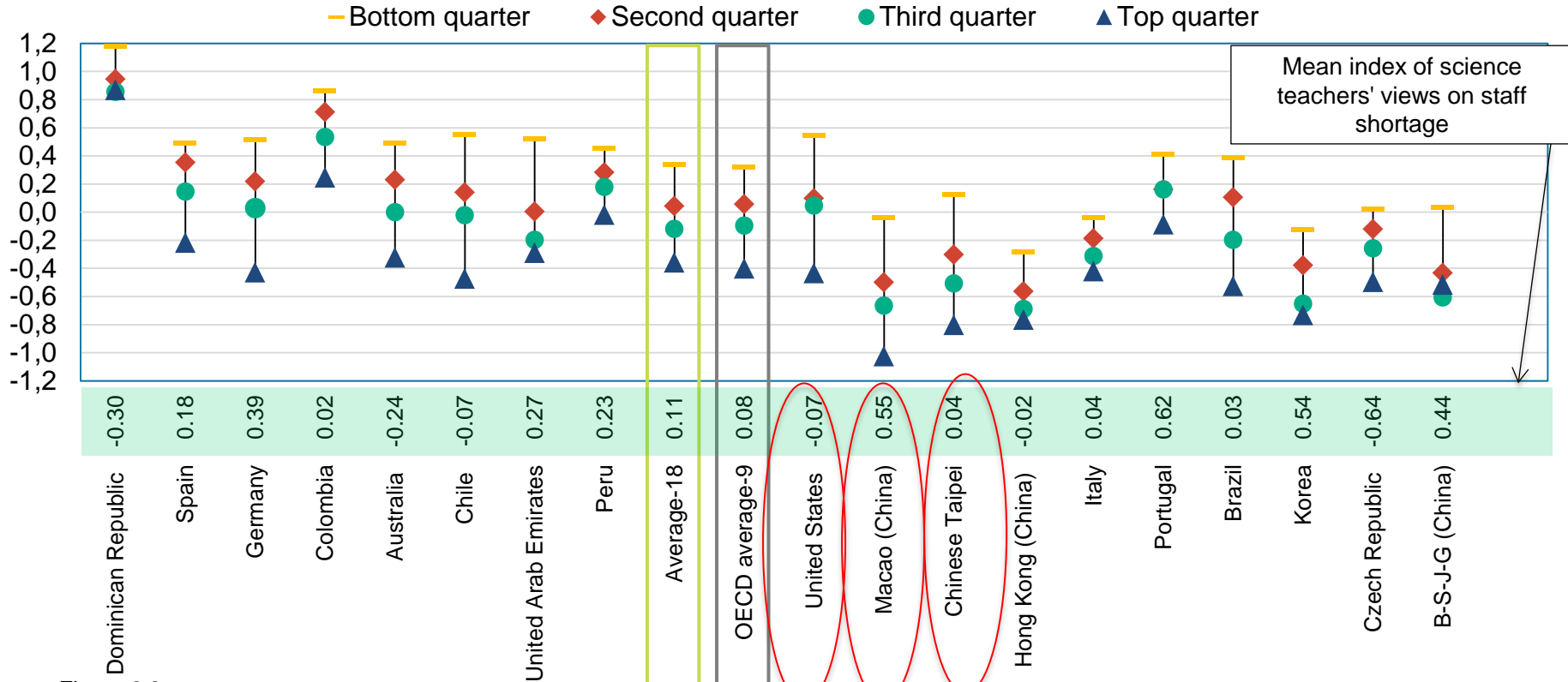
Teachers who collaborate with colleagues are more satisfied with the current job



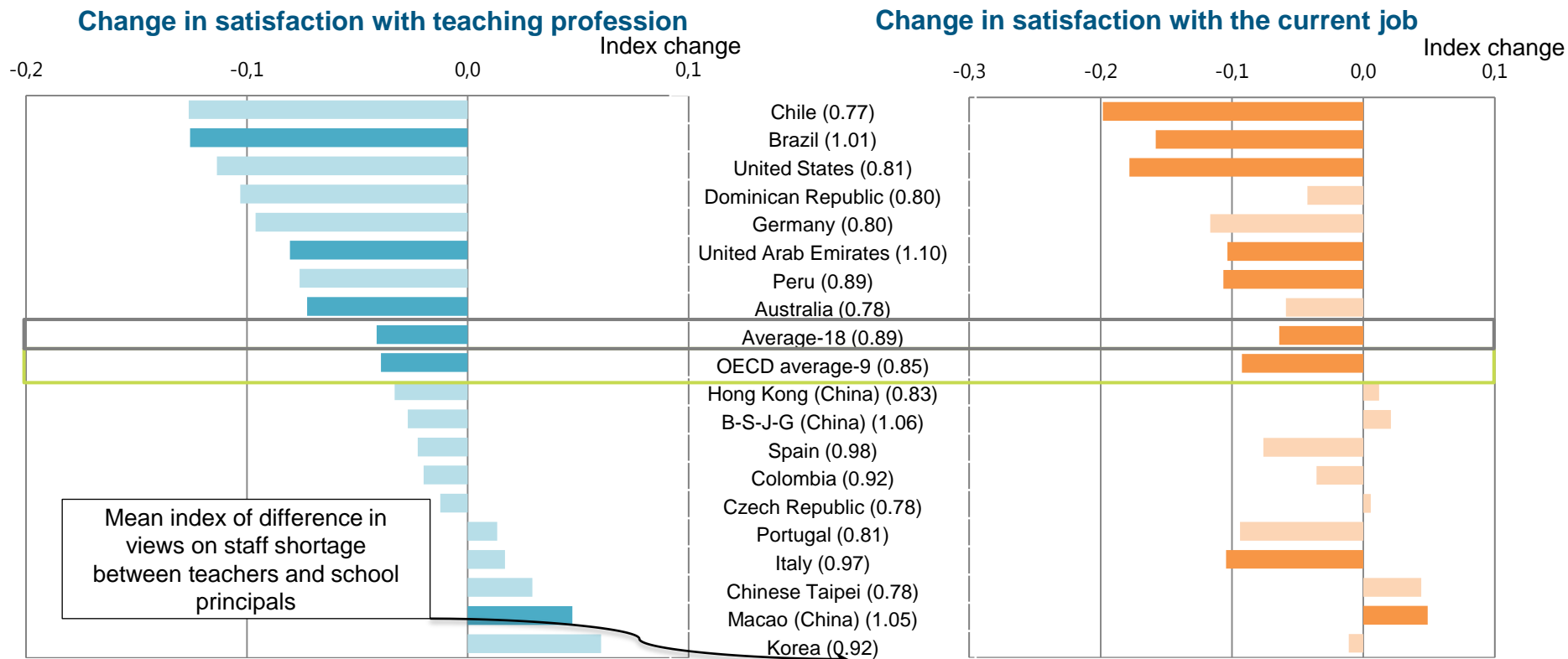
Teachers who perceive greater staff shortages are less satisfied with the teaching profession



Teachers who perceive greater staff shortages are less satisfied with the current job



Teachers are less satisfied when there are differences in perception between them and school principals on staff shortages



Factors not associated with teacher satisfaction

- large **proportions of immigrant students** in the school (more than 30%)
- large **proportions of students** who do not speak the language of the host country (more than 30%)

Conclusion

- Most satisfied teachers tend to be those who were personally **motivated from the beginning** to become teachers
- Teachers tend to more satisfied when:
 - They work in a **collaborative** environment
 - They have sufficient human and educational **resources**
 - They have the opportunity to undertake **professional development** activities
- In contrast, a poor **disciplinary** climate undermines teacher satisfaction while a more diverse school environment does not

Implications

- Pay attention to motivation
- Provide sufficient educational resources for teaching science and improve school climate
- Encourage science teachers' collaboration and self-growth

Thank you

A group of children are running in a field of yellow flowers under a blue sky. The children are holding hands and appear to be in a circle, running towards the camera. The background is a bright, sunny day with a clear blue sky and some green trees in the distance.

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