



SKILLS FOR THE TWIN GREEN AND DIGITAL TRANSITION IN AGRICULTURE

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Vocational education and training for agriculture in transition

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OECD works related to skills and VET in agriculture and the food sector

- OECD Agriculture and Food Policy Reviews
 - Innovation, Productivity and Sustainability (2015-19)
 - Canada, Australia, USA, Sweden, Latvia, China, Japan etc.
 - Policies for the Future of Farming and Food
 - Norway (2021)
 - **EU, the Netherlands, Spain (2023)** and more....
- Upcoming report “**An assessment of the labour and skills shortages in agriculture and the food sector**”
- OECD Meeting of **Agriculture Ministers 2022**: Session on skills

OECD Food and Agricultural Reviews
Innovation, Productivity and Sustainability in Food and Agriculture
MAIN FINDINGS FROM COUNTRY REVIEWS AND POLICY LESSONS



OECD Agriculture and Food Policy Reviews
Policies for the Future of Farming and Food in Norway



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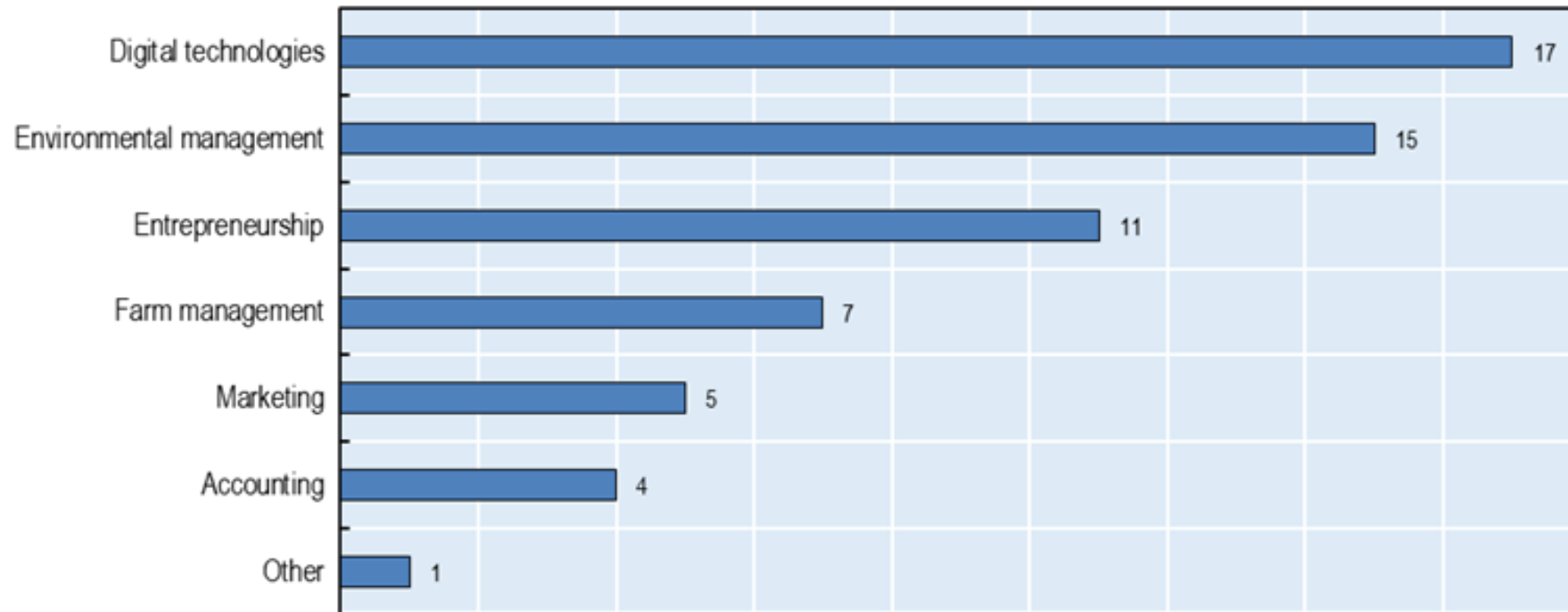
The agriculture sector faces some unique challenges

- **Aging, lower skilled workforce** in a sector relatively unattractive to young entrepreneurs
- Fewer, larger farms and **increasing reliance on hired labour**
- **Seasonal and temporary work** is a large share of the total
- Relatively little visibility of **agriculture labour data** compared with national statistics



EU Member States find skills challenges towards twin green and digital transition

- Long-term skills needs and knowledge gaps identified in the food and agriculture sector of Member States



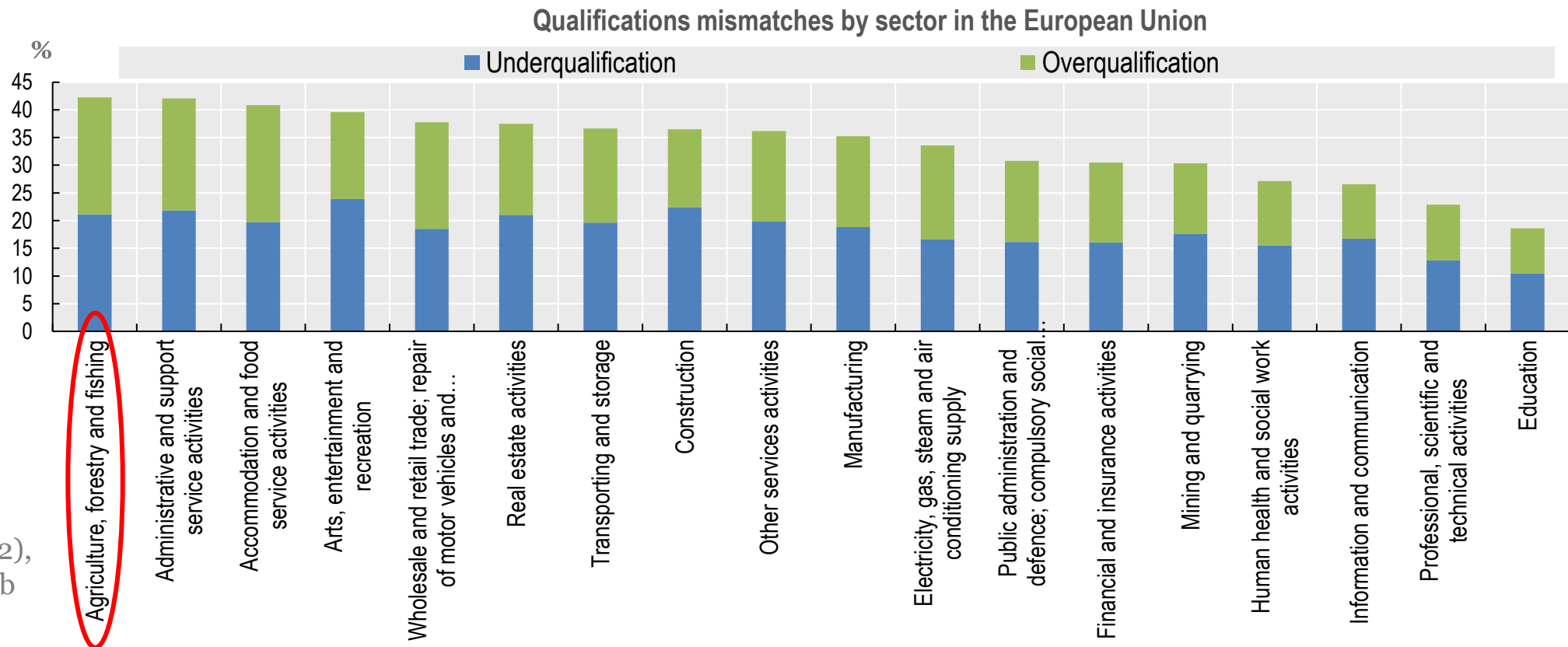
OECD (2022), EU Member States survey on Agricultural innovation policies (unpublished results)



Skills mismatches are critical in EU's agricultural sector, and may impede innovation

- In the EU, the agricultural sector shows the greatest qualification mismatch* in the whole economy (in 2019)

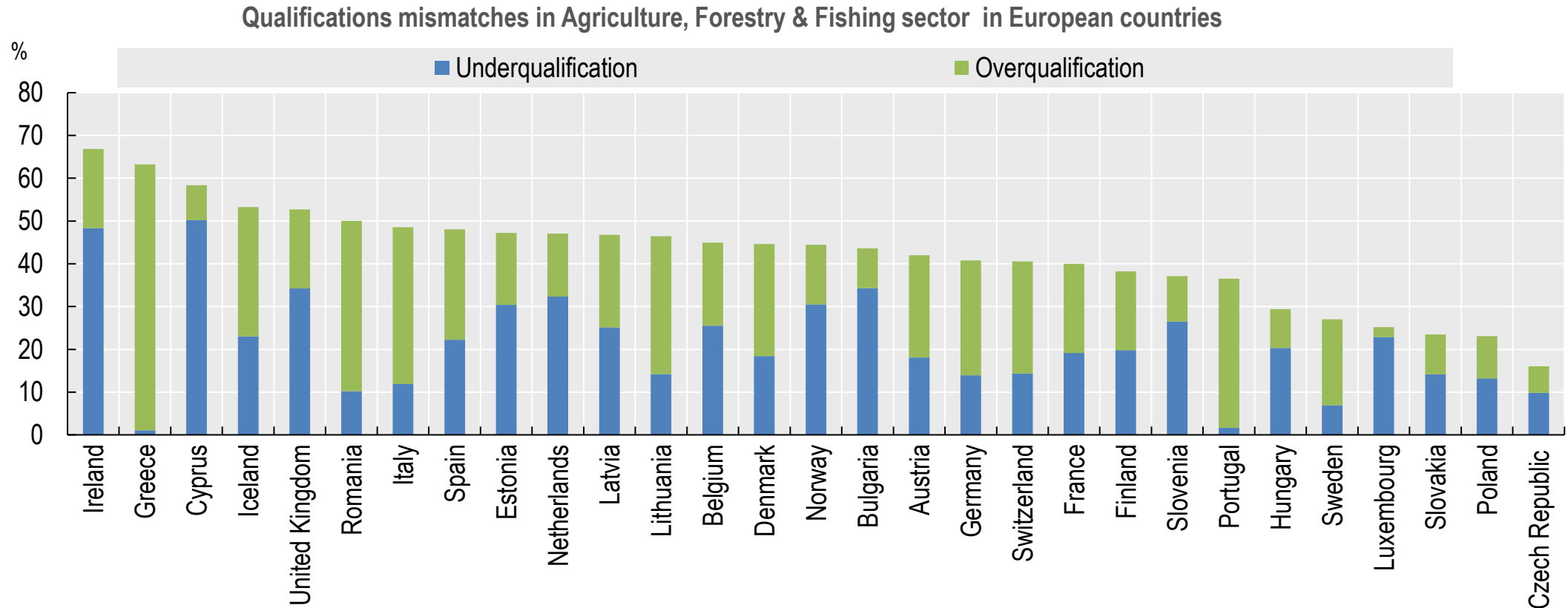
*when workers have an educational attainment that is higher or lower than what is required by their job.





The levels of qualification mismatch vary among EU Member States

- The levels depend on multiple factors, such as labour market conditions, composition of occupations (e.g. skilled farmer vs manual labour) in the sector





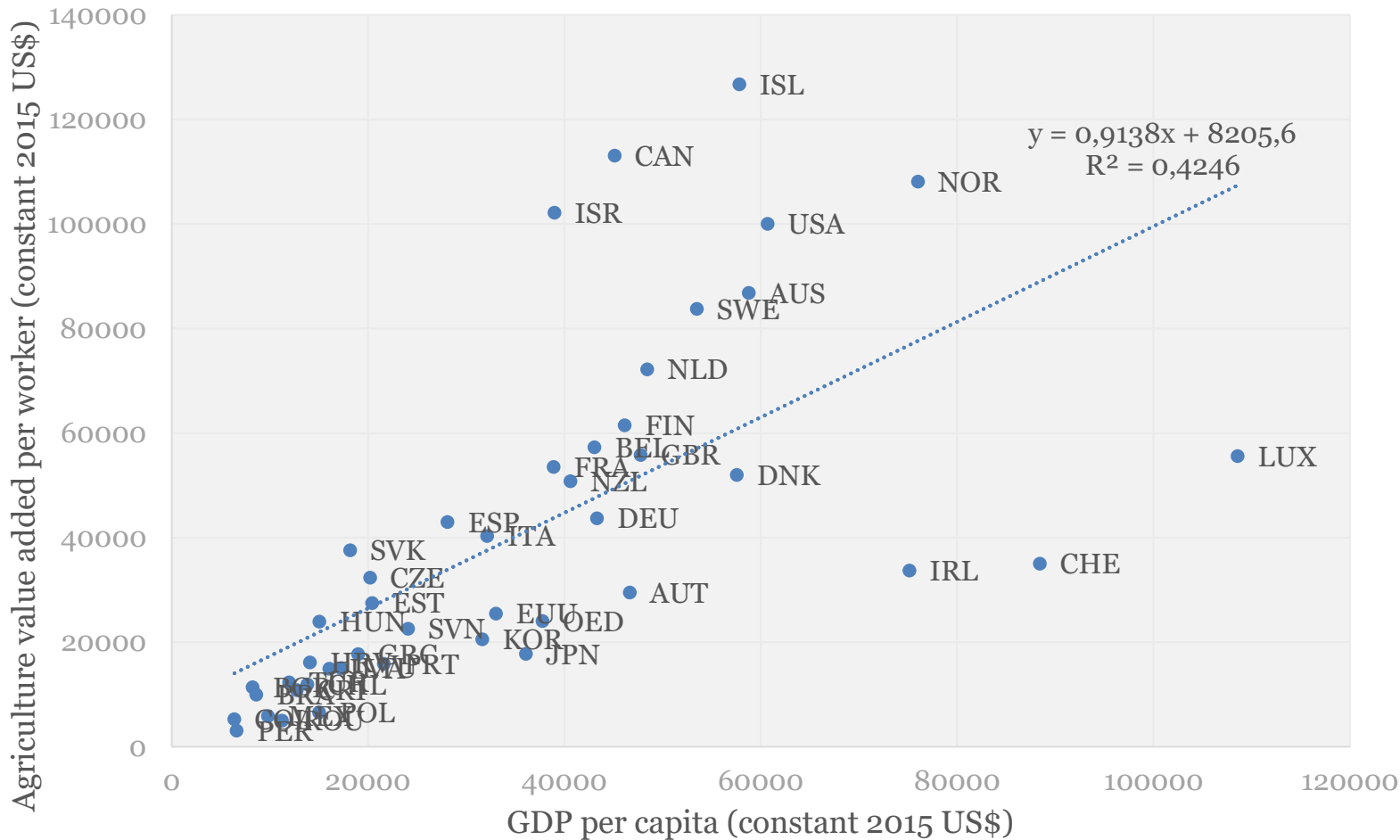
OECD Strategies to reduce skills shortages and mismatches (all sectors in general)

- Opportunities to reduce skills imbalances could include:
 1. Retaining talent by stimulating sustainable wage growth and improving working conditions (labour market policies)
 2. Facilitating internal mobility and attracting skilled workers from abroad (structural policies)
 3. **Strengthening the responsiveness of the education system** to changing skills demand (educational/skills policies).
 - (4. For agriculture, **strengthening the roles of farm advisory services**)



Better education/training systems matter

Agriculture value added per worker vs. GDP per capita across various OECD countries, 2019



The agricultural value added per worker is higher in higher-income countries

This is likely to result from several factors

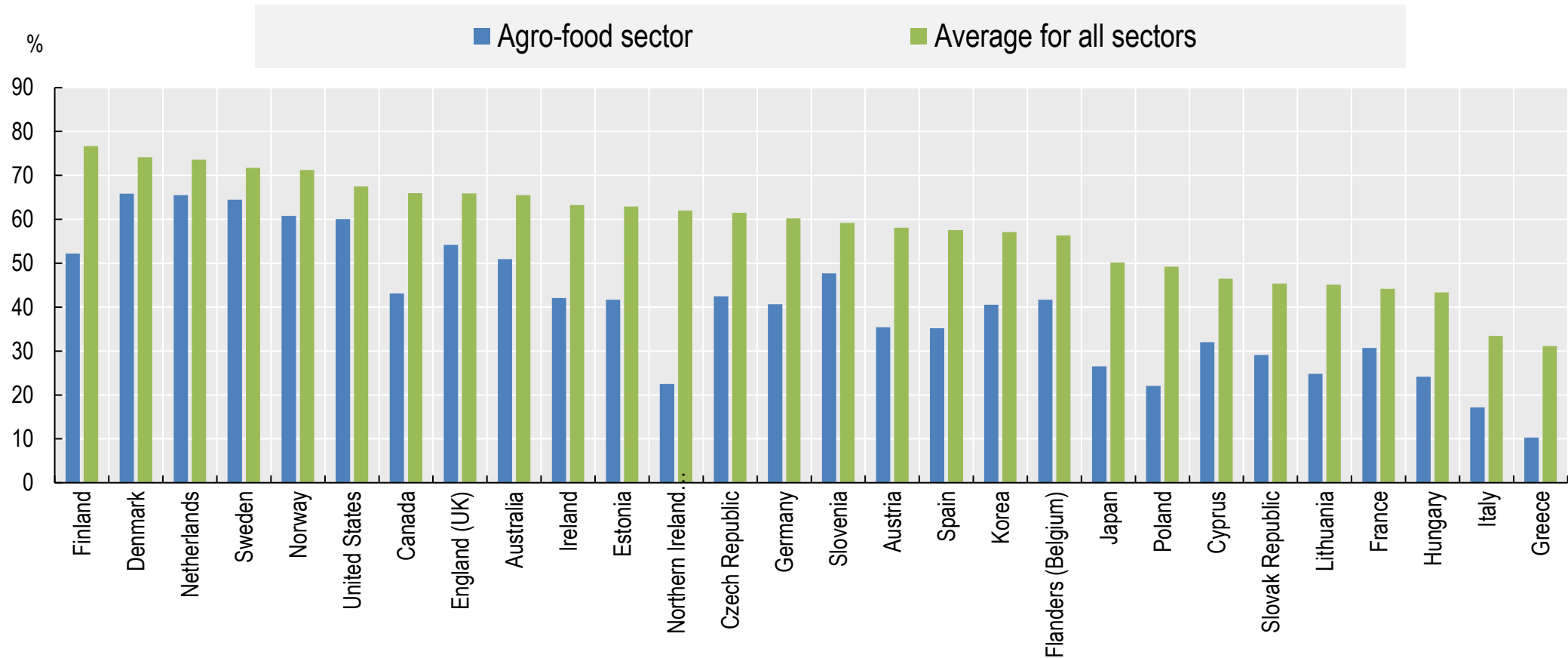
1. technology adoption, affordability of agricultural inputs
2. implementation of more productive practices
3. **result of a better educated/trained human capital**

Source: The World Bank
<https://data.worldbank.org/indicator/NV.AGR.EMPL.KD>



Participation of agro-food workers in vocational education and training is still lower than in other sectors

Participation in Adult Education and Training



Notes: Agro-Food industry includes agriculture, forestry and fishing, manufacturing of food and manufacturing of beverages. Adult education and training (AET) refers to participation in formal or non-formal AET in 12 months preceding survey.

Source: PIAAC survey



Barriers to learning: more than just skills delivery

Cost	Providing on-the-job training may be costly. Accessing training courses can also be costly and inaccessible.
Lack of time to complete/deliver staff training	Training can be provided in ways that are not accessible to busy farm workflows.
Geographic accessibility	Many farmers are isolated and cannot travel long distances to access training.
Gender inequality	Demonstrations in Europe tended to attract younger men.
Poor rural infrastructure	Lack of access to technology because of the ‘digital divide’ can inhibit access to certain types of learning, e.g. online, videos etc.
Fragmented learning infrastructure	Lack of co-ordination between e.g. higher-, further-education, adult learning, can fail to deliver lifelong learning and a complementary package of skills training.
Inclusion of seasonal workers	Training providers within countries can ignore and exclude seasonal immigrant workers.
Reluctance to share knowledge	Learning in discussion groups can be impacted if farmers are unwilling to share knowledge (e.g. due to competition or bad facilitation).

Source: Rose (2021), “What skills are needed in farming and how can they be learned”.
Background report prepared for the OECD Secretariat, Unpublished



Towards better agriculture-related education and training

- Making agriculture-related education **more attractive to students**
 - **Anticipating new skills demand** and **adapting courses** accordingly
 - **Strengthening the partnership** between agricultural education and **the agro-food industry** to adopt to industry's needs and students' choices
 - Collecting the **right data**, and **making best use of available data sets** (e.g. by matching) for in-depth skills assessment
- Offering **life-long training** programmes
 - **Responding to need**, including for digital, environmental and management skills
 - Covering **all workers**, including immigrants, women and seasonal workers
 - **Removing barriers** for individuals and employers to adult learning opportunities



Thank you for your attention and Contact us

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www.oecd.org/agriculture



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