A 2017 study found that closing the gender gap in STEM education would have a positive impact on economic growth in the EU, contributing to an increase in GDP per capita of 0.7–0.9% across the bloc by 2030 and of 2.2–3.0% by 2050. The study predicted a closure of the gender pay gap by 2050, by which time 6.3–10.5 million jobs should have been added to the European economy, about 70% of these occupied by women (EIGE, 2017).

AI will play a key role in the Fourth Industrial Revolution. In 2019, companies lamented ‘a shortage of skilled talent to clean, integrate and extract value from big data and move beyond baby steps toward AI.’ This finding emerge from a 2018 survey by Price Waterhouse Coopers of nearly 1,400 chief executive officers (CEOs) in 91 countries. The report found that it was not only a matter of hiring or developing AI specialists and data scientists. It is equally important to cultivate a workforce ready to use AI-based systems (PwC, 2019).

In the Asia–Pacific region and Africa, as many as 35% and 45% of company CEOs, respectively, expressed ‘extreme concern’ about the availability of necessary skills, in the survey. Globally, CEOs saw retraining and upskilling as the best answer but more than one-quarter of company CEOs in the Middle East and one in five in Western Europe saw hiring outside their industry as a potential solution (PwC, 2019).

The skills shortage is driving competition, as companies and institutions vie to attract and retain talent (PwC, 2019). This can offer a window of opportunity for women trained in related field, who may find themselves in a strong bargaining position when it comes to negotiating their working conditions with a prospective employer.

**An ethical responsibility to avoid misuse of AI**

Women have a stake in participating in the digital economy to ensure that Industry 4.0 does not perpetuate gender bias. AI is already defining societal priorities. If women are contributing less to big data or social media data, their needs are likely to be neglected by projects designed on the basis of these data, such as smartphone applications. To mitigate inappropriate policies and actions based on non-representative data, ‘we need to put communities who will be impacted by the information systems into the process of making them,’ says Catherine D’Ignazio, co-author of *Data Feminism* (Ignazio and Klein, 2020).

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**Figure 3.1: Probability of automation in England, 2017**

Source: UNESCO (2019), using data from the UK Office of National Statistics