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states can keep up with these developments and respond effectively. Particular attention will need to be paid to intellectual property and competition law. For instance, the strict enforcement of intellectual property rights for AI algorithms may well support increasing economic concentration. It's also likely that national governments may have less and less influence over such decisions and trends. Even so, many developing country governments are not giving these developments their due attention.

Risk 3: Bias baked into algorithms

Finally, the AI algorithms that are at the centre of the fourth industrial revolution will reflect and perpetuate the contexts and biases of those that create them. Difficulties faced by voice recognition software in recognising particular accents are a relatively innocuous example. Of course, the promise is that AI will enable such systems to learn to address such issues. But the learning process itself might be influenced by racial, gender, or other prejudices.

AI algorithms are developed almost entirely in developed regions. Thus they may not sufficiently reflect the contexts and priorities of developing countries. Ensuring that AI algorithms are appropriately trained and adapted in different contexts is part of the required response. It would be even better if developing countries become more engaged in the development of new technological systems from the get-go.

Governments need to act

These three risks require that academics, businesses, and civil society actors attend to the role of new technologies in developing countries. But a special responsibility lies with governments. For the most part, they seem to be distracted.

Governments ought to carefully assess the above risks in their national context and then establish corresponding policies and programs. This includes national skills development and work placement platforms, intellectual property and competition policies, and local technology adaptation and development.

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