

Rise of the machines: The changing face of accounting

With technology changing the face of their business, accountants need skills beyond the traditional know-how to survive.

Analytics and big data have disrupted the accounting scene – but this could also present new opportunities, according to Dr Cheng Qiang, dean of Singapore Management University (SMU) School of Accountancy and Lee Kong Chian Chair Professor of Accounting.

"A lot of people in society have a very narrow understanding of accounting. When many people think about accounting, they think about

bookkeeping," he said. However, accountants do more than keep track of financial transactions. They collect and analyse a company's financial data, and provide advice on its business decisions, such as risk management and digital planning.

"Nowadays, a lot of accounting firms are switching to risk management and advisory," said Dr Cheng.

Just like in sectors such as law and healthcare, jobs in accounting that can be automated are being replaced by machines. "But at the same time, some jobs can be carried out more effectively (by machines).

More importantly, some new jobs will be created because of the technology," said Dr Cheng.

For example, accountants need to make judgments based on information, which may be hard to come by. With technology, they can collect a lot of information, to the point that it can be too much. The massive amount of data then needs to be sifted through. The traditional way of teaching accounting professionals to simply analyse and look at data is no longer enough, said Dr Cheng.

Companies now want employees with IT skills, such as programming

and data visualisation. "It is very important for schools and universities to think whether we are preparing our students for the demands. We must fill the void in their skill sets."

SMU has introduced a set of data analytics programmes to address this industry need. It will offer a second major in accounting data and analytics which, unlike the similar course in the School of Information Systems, will focus on accounting.

There will also be a master's programme focused on accounting data and analytics, which SMU claims will be the first such in Asia. The first cohort of about 40 students is set to start in August. There will also be a four-day Certificate in Accounting Data and Analytics programme to let accounting professionals learn more about data analytics, while a customisable Graduate Certificate programme will cater to participants from SMU's partner organisations.

Both will be taught jointly by the School of Accountancy and School of Information Systems, and can be paid for with SkillsFuture credits.

Dr Cheng said in designing the courses, the school held focus group discussions with 23 senior level industry leaders to find out what bosses want. It revealed that there is a lack of professionals who can work with both data and accounting.

Mr Philip Yuen, chief executive officer of Deloitte Singapore, said it is important to groom the next generation of accountants to "enhance their audit analytics capabilities so they can be more productive and efficient and value-add to clients".

In the past, companies would hire IT professionals or accountants, depending on requirements, explained Dr Cheng. However, one problem is that the accounting professionals and the IT professionals do not always understand each

other's work. "These two sides sometimes have difficulty communicating with each other, as they come with different mindsets and paradigms. So the best thing for the employers is to find someone who can understand both," he said.

Mr Benjamin Lee, 27, a researcher in a field of computer science called machine learning, said accountants should view machines as "enabling tools", not adversaries.

He graduated from the School of Accounting in 2015, and did a master's in business analytics at the University of Surrey in Britain. "If we want to compete with computers, it's a no-brainer. Computers win every day. They are very fast and very efficient. The only way we can beat them is that we do the high-level stuff, they do the manual work, which is the automation stuff."

Fabian Koh