

# Management account in the fourth industrial revolution

[History](#), [Revolution](#)



Management accounting has always been considered important to the social and economic system of every nation, concerning with the identification, measurement and communication of accurate and timely information which allows managers to plan and make decisions. Without any legal or regulatory requirements, managers are free to choose their own content and form of reporting to suit varying circumstances, with aim of pursuing respective organizational goals, primarily towards the direction of increasing shareholder wealth.

As time progresses, our communities have developed into its current trend of mechanization and data exchange in manufacturing sectors, given the name “ The Fourth Industrial Revolution” (4IR), building upon the previous Digital Revolution (En. wikipedia. org, n. d.). 4IR, in particular, affects human relations, especially when technology breakthroughs in fields such as artificial intelligence, robotics and biotechnology has been rooting inside societies and reshaping our daily lives. The advancements enable easier connectivity between individuals online through communication technology (Marr, 2018). Without a doubt, the automating process has its initiative to provide a better and smarter life for people through advanced solutions. However, this also raises concerns for management accountants as it is arguable it would free them from the ordinary routine-processing tasks. With computerized systems, are these accountants still in need?

In the 21<sup>st</sup> century, all organizations aim at providing goods and services to different stakeholders thus they could attain goals. Rather than focusing on the originated slag and manual manufacturing processes (Skoulding, 2018),

the combination of cyber-physical systems and the Internet of Things would leave accountants with more time to rearrange plans for budgetary controls and concentrate on value-adding factors for the good of the business. The Cloud System is arguably one of the most influential technology for the future, for the manufacturing sectors in particular; Organizations would see costs being largely cut since all information would now be stored on an online system and accountants could now access them at anytime, at anywhere. This has feasibly endorsed managers with the power to have a more thorough view of its business drivers through using technical and fundamental analysis, and in such way developing a better judgement on the factors which would bring a comparative advantage for their goods to edge out, e. g. better quality, lower prices etc. Technology seems to have switched the managers' roles from being simple bookkeeping to strategic business partners, which may require them to think outside the box, instead of the routine and process-driven roles (Skoulding, 2018). Technologies and management accountants do stand a point to co-exist.

Nevertheless, it is no secret that it would remain a challenge for them to co-exist. After all, the delivery of a whole brand new system and eliminating part of the incumbent workers would take time for people in the society to adapt. People with old thoughts are likely to cling to them (Edwards et al., 1968), for instance, customers may prefer part of their goods remain controlled and refuse to accept a whole new technology-made good; On the other hand, shareholders may have thoughts of a possible technology breakdown and the entire company's operations would become a going

concern and their investments are likely to be at risk. In other words, trust is a big issue to overcome as people do lack confidence in them and prefer to stick to their thoughts. With such barriers, the delivery of the technology systems may take longer and require excess resources to be effectively implemented. Besides, the switch of the accountants' roles is likely to cause operational problems. Management accountants are used to complete the same repetitive and hectic tasks on a daily basis with the aim of increasing shareholder wealth, although this aim remains, however, switching themselves to strategic business partners in the aid of technology may not mean they would have performed such assignments as well as they previously had, and it might worsen organizational performances, affecting shareholder wealth in terms of dividends distributed at year end.

Next, new technologies are presumably to create more opportunities for the organization. With more developments, it is likely to stimulate the management and production teams to create products and services which would best suit their customers' needs, aiming at creating organization value. In the technology industry, either as an incumbent firm or a new entry, management should always focus on creating distinctive products. Before such advancements, managers and production teams may only focus on designing products which would have the greatest marginal profit or the minimum costs. For example, a news agent may develop a simple news application to cope with the increasing usage of mobile phones, but what about an application which can give you news and entertainment at the same time, like the social media application Facebook? Other than solely

focusing on creating value, the developers of Facebook also do care about value preservation and they constantly offer updates on the application through the Cloud System, via cheaper infrastructure and set up costs. This would attract different investors to the organization, either by buying shares through a stock exchange or posting advertisements on their application, and developers could constantly use this sum of money to improve the application and the Cloud System so as to increase firm and shareholder values.

Arguably, using the lump sum to improve the Cloud System for the organization should be a benefit for the long run. With a more advanced computer system, it is more likely to have better processing power and greater capability to store data. Not only would this affect the organization to provide better services as a whole, but also the clients who are consistently being empowered by the data and technology could enjoy greater quality of products at more affordable prices, achieving a win-win basis. Whilst these systems are being constantly improved, however, it is quite a difficult thing to alter human's ability to process data since our brains' capacities are limited. With more data in place, there is a greater possibility that managers could easily get distracted, and massively impacting the way they do their jobs. As a result, faulty plans and decisions may be made in the long run and the efficiency gains from technologies may not be sufficient to cover us the resulted investment losses, decreasing shareholder wealth.

Last but not least, as one of the most influential technologies, the more advanced computerized systems from the Cloud can perform and upload

real-time data to the database (Skoulding, 2018). As managers of middle-sized or large organizations, who are likely to have changing perspectives on objectives from time to time, real-time data can immediately point out any falling behind operations and customers can immediately react to the particular areas so as to mitigate those effects to a minimum. Apart from that, real-time data also includes competitors' information in which managers may find useful when finding out its competitors are lowering prices or having completely different product lines. Managers could then immediately meet with the Board of Directors to draw up any temporary solutions so the firm wouldn't be left behind in the industry and being forced out of the market, resulted from not complying with customer trends immediate enough.

None of 4IR would have been successful without the Cloud System. All software and hardware would collect data from the various production lines, departments and regions, and send the data to the central computer in which the management team can gain access to, which is a well-known fact to either external or internal sources. Precisely because of this, we cannot deny that security could be a major issue. First of all, strict securities policies should be in place as a caution effect. Without strict policies, the data managing team know that they aren't going to be severely punished for any sorts of minor mistakes, in which this may have led to data leakages. In such way, they are more likely to treat their work more properly as they should have. Secondly, to prevent data from being hacked by competitors across the world, a line of security team should be implementing both the software

and the hardware, at a 24-hour full controlling basis; To further protect the organization, data access should only be allowed to the top management and management accountants which have the power to influence worldwide operations.

In conclusion, we have examined the possible effects of what technology could have brought us during the 4IR and we have listed out the possible reasons of why technology couldn't fully replace the management accountants, and they do stand a reason to co-exist. With the reasons listed above, in addition to some sorts of strong leadership from the managing directors, for example, have a deep understanding of how technologies could strategically with their respective businesses and look at the value propositions and have particular plans in place, together with the efforts from all stakeholders (Trailhead. salesforce. com, n. d.), we are confident that the existence of management accountants could lead to a better overall organizational performance during the new era, and could certainly achieve their main goal of increasing shareholder wealth.

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