Chapter 6
Are Managers Still Necessary in the Era of the Fourth Industrial Revolution (I4.0)?

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ABSTRACT

As the Fourth Industrial Revolution (I4.0) technologies continue to evolve and converge, the role of the managers needs to urgently adjust and change accordingly. While some are delighted with the promises of increased flexibility in industries in tandem with productivity and better quality, others are concerned with mass unemployment. This is a chilling vision of how robots will completely reshape industries and disrupt jobs, thus creating societal change of an unforeseen magnitude and speed. But one thing remains the same: management is the hinge on which the fate of every organization swings. Managers remain the key driver to build long-term success in organizations. In this context, managers need to deal with emerging challenges, opportunities, management practices brought about by the 4IR technologies. In this context, they have to address the six crucial transformations namely in technology, the pattern of work, business, society, lifelong learning, and leadership, and provide countermeasures to thrive within this brave new tech-driven and globalized business world.

INTRODUCTION

Breakthrough technologies and innovation brought about by Industry 4.0 (I4.0) are widely recognized as disruptive forces for conventional businesses and industries, thus forcing organisations to embrace and adapt to change at exponential speed (Schwab, 2016). For example, recent advancements in internet technologies, automation and artificial intelligence (AI) are redefining the managerial roles of managers. Managers have to change and adapt to the changes and how to manage their work, workplace and workforce. It is because the deployment of AI and RI (remote intelligence) technologies that make it easier for

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organisation to outsource services jobs. Talented foreigners can telecommute into local workplaces and compete directly for white-collar service and professional jobs. As a result, managers at all levels have to learn how to plan, organise, lead and control virtual cross-cultural team (Osborn, 2019) and will have to tackle global globotic upheavals in terms of inequality and job displacement and unemployment in organisations (Baldwin, 2019). Furthermore, the rise of smart collaborative machines has caused major concern which leads management scholars to paint an apocalyptic outlook for the traditional manual workforce that is being decimated by a highly-automated robot workforce (Ford, 2016). The emergence of advanced robotics with AI from supercomputers, drones and virtual assistants to 3D printing, smart thermostats, wearable sensors and microchips smaller than a grain of sand, has enabled robots to take over not only difficult and dangerous tasks, but also administrative and managerial tasks (Lehmacher, Betti, Beecher, & Grotemeier, 2017). More AI-trained computers and robots are programmed to mimic that human to perform tasks in call centres, accounting and law. At their most extreme, predictions foretell that the majority of those traditional "white-collar" jobs are to be wiped out by robots and smart software. Consequently, the demand for managers will be low as such technologies can free managers from a sort of white-collar drudgery. Managers just have to focus on more creativity and innovation beside managing and leading a smaller, but skilled workforce in tech-driven environment

Managers at all levels will have to adapt to the world of smart machines. The fact is, AI will soon be able to do cognitive tasks that consume much of managers' time faster, better, and at a lower cost. Budding managers will need coaching skills, tech-savviness, nuanced communication, vulnerability and empowerment in order to manage the skilled workforce. Brynjolfsson and McAfee (2014) asserted that fewer people are working, and wages are falling even though productivity and profits soar. IN this regard, there will be a rise in a new social class - the precariat who are 'working poor', people who have several jobs, but still cannot make ends meet. Consequently, this will result in social inequality, the implosion of the consumer economy, and economic insecurity, rather than broad-based prosperity (Ford, 2016). In other words, there is a hollowing out of the job market, thus leaving a lot of workers out of work for a lengthy period and struggling to make a decent living.

It is all happening at a whirlwind pace as multinational companies (MNCs) and few small- and medium-sized enterprises (SMEs) have jumped onto the bandwagon to ride on the I4.0 promise of the high degree of competitiveness in terms of flexibility, productivity and quality (Ng, 2020; Telukdarie, Buhulaiga, Bag, Gupta, & Luo, 2018). Indeed, I4.0 disruptive technologies are transforming all end-to-end steps in production and business models in most sectors of the economy, thus revolutionising traditional ways of creating value and re-shaping management of global supply chains (Lehmacher et al., 2017). The majority of MNCs have deployed automation, AI, advanced robotics, autonomous systems and additive manufacturing in their operations to gain a competitive advantage to dominate their industries. Factories and offices are being transformed and re-structured to hire more robots rather than human workers, thus massively displacing workers. Under this new environment, managers have to think creatively on how to manage. They have to communicate and lead the technical workforce. It is true that I4.0 has brought tumultuous disruptions to traditional business models and hastening the need for change to align with digitalisation of managerial activities especially in digital procurement, supply chain and logistics capabilities (Lehmacher et al., 2017; Shamim, Cang, Yu, & Li, 2016).

In the era of I4.0, there will be fewer low-skilled workers for managers to motivate to secure participation, engagement for organisational performance. Managers have to handle more programmers and technicians to programme codes and maintain machines and robots. Under the AI centric organisations,