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Digitalization and Working Hours: A Viewpoint of Future Accountants

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Abstract

The global industrial landscape has changed because of the Fourth Industrial Revolution (IR4.0) with the increased reliance on digital software and automated robotic functions to replace human labour. Since the advent of the internet, corporations have been undergoing a digital transformation. People today find it impossible to envision their personal or professional life without digital tools. For enterprises, digitalization has brought up a variety of challenges as well as excellent opportunities. It similarly goes to the accounting profession. Thus, this study attempts to look into the effect of digitalization on working hours either as an opportunity or risk, from the viewpoint of future accountants. In total, 546 questionnaires were distributed via online to accounting interns from the top six public universities for accounting and finance in Malaysia. The findings show that future accountants view the effect of digitalization on working hours, as both an opportunity and a risk to the accounting profession. As workplace digitization presents both opportunity and risk in relation to working hours, managers must comprehend these issues fully, to reduce risks and maximize positive outcomes. The findings allow managers to gain a better understanding of the significance and effects of digitalization.

Keywords: Digitalization, Working Hours, Future Accountants, Opportunity, Risk, Accounting Profession.

Introduction

Computing power continues to grow rapidly with more and better data becoming available, and machine-learning techniques have recently made tremendous breakthroughs. The machines' capabilities are expanded where increasingly complex tasks can now be automated with a level of accuracy that appeared impossible just a few years ago (Arntz et al., 2020). Today's global economy is experiencing a phenomenon called digitalization, which has an impact on almost all processes. People today find it impossible to envision their personal or professional life without digital tools. With the rapid transformation of work caused by digital

technology, both in terms of content and organization, the labour market and, ultimately, the economy as a whole will experience structural shifts. Since the invention of the internet, digitalization has been transforming businesses. For enterprises, digitalization has brought up a variety of challenges as well as excellent opportunities. The exponential growth in technology has therefore influenced many aspects of human life. The adoption of digital technologies not only led to the digitalization of businesses but also the digitalization of daily personal routines.

Undeniably, traditional organizations undergo significant change because of digital transformation. Businesses are making significant investments in digital transformation. They are developing a stronger data focus (Webb, 2020 in Alam & Hossain, 2021). These changes are having an impact on almost all of the business' functional areas, including marketing, production/operations, human resource management, and research and development (Alam & Hossain, 2021).

Digitalization equally affected the accounting profession. Both the technical and ethical stances of the accounting profession are being impacted by this change. Traditionally, the accountant's work was performed manually and task completion may be time-consuming. With digitalization, accountants' roles are expected to radically change to be more closely tied to contemporary tools and advancements in technology (Gulin et al., 2019). As digital technology development and change are continual processes, it is crucial for accountants to continuously update their technological abilities in this rapidly changing digital environment. (Alam & Hossain, 2021).

The effects of digitalization can be seen in practically all areas of accounting such as financial accounting and reporting, cost and management accounting, taxation, auditing, and forensic accounting. As stated by Webb (2020 in Alam & Hossain, 2021), five technology-related factors that can affect the finance and accounting profession include Velocity, Volume, Value, Variety, and Veracity. The increasing adoption of digital technologies into accounting practices to maximize efficiency and minimize efforts will have an impact on accountants' work. As the IT infrastructure enables them to embark on other more important obligations and handle other more impactful tasks, professionals seem to value the idea of automating rather routine and repetitive tasks (Andreea et al., n.d; Richins et al., 2017).

The technological adoption and adaptation are not just for the accountants who are currently in practice, but also the accountants of the future who will continue to provide accounting professional services. It has been anticipated that in the future, robots could contribute up to 20% of all accounting department labour hours (ACCA, 2013). Both aspiring and experienced accountants must prepare themselves to meet the shifting demands placed on the accounting profession because of digitization.

Thus, the objective of this study is to assess whether future accountants view the impact of digitalization on working hours as an opportunity or a risk to the accounting profession. The Technology Acceptance Model (TAM), developed by Fred D. Davis in 1989 as an extension of the psychological theory known as the Theory of Reasoned Action (TRA), serves as the foundation for this study. TAM is the most popular paradigm for describing how technology is adopted at all organizational levels and the individual level (Zhang et al., 2020). TAM claims

that a person's intention to utilize technology is based on two factors, which are his perception of its simplicity and usefulness i.e. perceived ease of use and perceived usefulness.

The remaining of this paper is structured to include firstly, a review of related past research; secondly, the methodology used, the analysis, and the discussion of results; and, lastly the conclusion, implications of the study, and future research.

Literature Review

Accounting Profession and Digitalization

The digital environment is still changing virtually every day. The economy, businesses, and perhaps society as a whole are going through a digital transition. Today, it is a necessity, and every aspect of human life is moving in that direction.

The digital transformation equally affects the accounting profession. One of the biggest shifts in the sector has been the transition from manual to computerized accounting systems (Arcega et al., 2015). Due to these changes, both consumer expectations and the range of the job performed by accountants are expanding. The role of an accountant has also radically changed because the accounting industry transitioned to digitalization and is strongly tied to contemporary tools and advancements in technology. The use of Big data in accounting and reporting, Cloud computing and continuous accounting, Artificial Intelligence, and Blockchain technology are all significant challenges that may be systematized in the accounting profession (Gulin et al., 2019). Therefore, accounting improvements and modifications are made possible by technological innovation and digitization.

Furthermore, the accounting profession was traditionally known to be so mundane, with many repetitive jobs. However, digital technologies have contributed to the changes in the accounting profession through three main aspects: accounting education, professional regulation, and accounting information systems (Stoica & Ionescu-Feleagă, 2021). Similarly, Davern, Weisner and Fraser (2019 in Alam & Hossain, 2021) identify three significant technological advancements that have revolutionized the accounting industry including Robotic Process Automation (RPA), Blockchain, and, Artificial Intelligence and Data Analytics (AIDA).

Digitalization and Working Hours

The phenomenon of the use of digital technologies in business and society is known as "digitalization" (Cijan et al., 2019). Similarly, digitalization or digitization refers to the "digital transformation of business" (Alam & Hossain, 2021). Both great potential and numerous obstacles have been brought about by digitalization in the workplace and everyday life. Theoretically, digitization might either have a beneficial or bad impact on how satisfied employees are with their jobs, for example, by reducing the amount of repetitive work and increasing the amount of exciting work (Bolli & Pusterla, 2022). Moreover, the technological unemployment, the quality and conditions of labour, the risk of even greater economic disparity, and others are all issues that concern the world (Governo Italiano, n.d. Cijan et al., 2019).

According to Bregenzer and Jimenez (2021), as the workplace becomes more digitalized, many new features of working life become apparent, including the need for support in

adjusting to and learning new digital technologies, and working in virtual teams, mobile working, and expectations of being always available. There may be dangers in certain workplace modifications that could be detrimental to workers' health. Their study evidenced all four digital work risk factors (i.e. distributed teamwork, mobile work, constant availability, and inefficient technical support) were linked to increased workplace stress.

On the other hand, there are many new prospects due to the growth of new industries and markets, increased environmental sustainability, enhanced production process safety and ergonomics, and others. One of the largest effects of digitalization on enterprises is that information has become more available and transparent. This enables firms to share more information with all employees, including those at lower levels of the hierarchy (Kuusisto, 2015). This ease of access led to higher worker productivity as well as higher demands at work and home (Chesled, 2020 in Cijan et al., 2019). With wide access to the information, the employees can undertake their tasks beyond the normal working hours. This then raised the question of how the digitalization of the world of work can affect concepts of extended work, i.e. an extended spectrum of forms of human work. Nierling and Krings (2021) examined the concepts of extended work from three perspectives – the volume of work, working time, and new digital forms of work. It becomes clear that the current processes of transformation brought about by digitalization are in theory consistent with the ideas of extended work and might even make their implementation easier.

Middle managers now have more time for reporting and identifying production issues as a result of digitalization. According to Korsen and Ingvaldsen (2021), with the time availability, they can also spend more time on development, ensuring the improvement of projects to become the centre of attention. Industrial era 4.0 requires developing new digital skills for the workforce, which will evolve the way that people work (Beechler & Woodward, 2009). Workers are also required to be competent in digitalization as it will help them to enhance and shorten their work time (Santoso et al., 2021). Digitalization has reduced the working time of the employees, which enables them to focus on the matter of innovation and improvement of the company matters. In fact, Bolli and Pusterla (2022) study discover that digitalization boosts job satisfaction among professional education and training (PET) colleges graduates by increasing productivity, making work more interesting, and encouraging interactions with co-workers and supervisors.

Similarly, the adoption of advanced computer systems has reduced the workload of accountants and simplified repetitive processes within traditional settings (Tekbas & Nonwoven, 2018). This makes it possible for accountants to work more effectively and efficiently in their daily tasks. Data is now easily available due to the understandable format of automation of data collection, processing, and visualization. The accountant now has enough time to devote to applying professional judgment to any issues affecting the company.

In short, for the company and specific employees, digitization has both positive and negative potential. Therefore, the fundamental issue is how to create a digital environment that encourages idea formation and development and guarantees that employees are engaging in appropriate working practices.

Research Methodology

Sample and Data

Future accountants are employed as the unit of analysis based on a non-probability purposive sampling approach. Given that accounting interns are final-year accounting students who would soon enter the accounting profession, this study treated them as future accountants (Suhaiza, 2014). According to data gathered from the internship coordinators in Malaysia's top six public universities for accounting and finance, there are 546 interns overall. Consequently, 226 accounting interns made up the study's sample (Krejcie & Morgan, 1970). However, efforts were made to distribute the questionnaires to as many accounting interns as possible out of the stated total number, via an online survey.

The Internship Coordinators of the six public universities were personally contacted to assist with the online questionnaire distribution. The respective Internship Coordinators sent the link to the online surveys to their accounting interns. The researchers self-administered the questionnaires, with at least three times interactions made with the corresponding Internship Coordinators to ensure that as many accounting interns as possible participated in the study. Ultimately, 187 out of 546 questionnaires, or 34.25 percent were returned, over the two (2) month data collection period.

Measures

The questionnaire gathered the respondents' demographic information and measured the respondents' opinions on the digitalization of the accounting profession in terms of working hours. The working hours were examined from the two perspectives of the opportunity and risk for future accountants. The items were adapted from (Voss & Riede, 2018) are rated on a five-point Likert scale of "1: Strongly disagree" to "5: Strongly agree", as listed in Table 1 below.

Table 1

List of items

Perspective of:	Items
Opportunity for Future Accountants	Digitalization reduces working time.
Risk for Future Accountants	Digitalization expands working time (work from anywhere and at any time).

(Source: adapted from Voss & Riede, 2018)

Analysis and Findings

Based on 187 or 34.25% of returned questionnaires, the SPSS analysis was conducted for the demographic information and mean score on the working hours as perceived by the future accountants.

Respondents' Demographic Summary

The demographic information of the respondents shows that only 38 responders (20.32%) were male, compared to 149 (or 79.68%) who were female (refer to Figure 1). Figure 2 shows that 157 respondents, or 83.96 percent, are between the ages of 20 and 24.

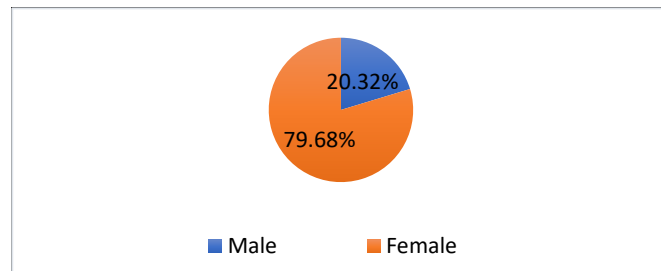


Figure 1: Gender

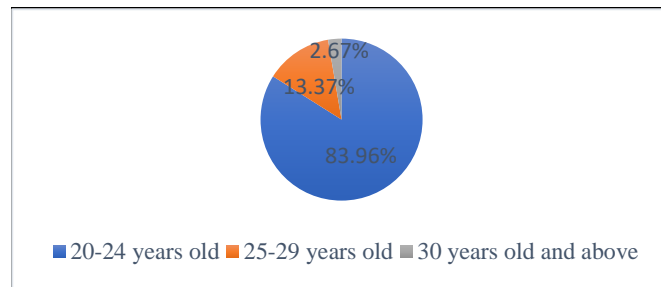


Figure 2: Age

In total, 182 (97.3 percent) of respondents are accounting interns with internships lasting between three and six months. Malay respondents made up the bulk of respondents (148, or 79.1%), then Chinese respondents (18, or 9.6 percent). Every single respondent is a Bachelor of Accountancy student at the respective universities.

Figure 3 demonstrates that the bulk of interns (116 or 62.03 percent) are attached to audit firms, followed by private firms (36 or 19.25 percent). Other employers comprised Federal government agencies, state government agencies, financial institutions, and others - including tax firms and essential services firms. The vast majority of employers are located in Selangor (48 or 25.7%) and Kuala Lumpur (43 or 23 percent). Less than 10% of employers are based in other states, with only 21 (11.2%) of them being in Johor. The respondents' credibility as study participants is shown by the demographic data.

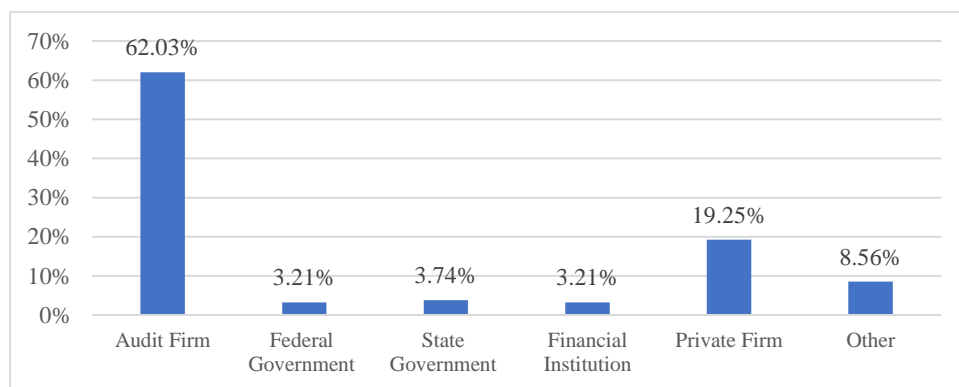


Figure 3: Business Sector

Mean Score for the Working Time

Table 2 shows the descriptive statistics (means, standard deviations, and standard errors of the means) of the working hours due to digitalization as viewed by future accountants.

Table 2

Mean score of working hours

	N	Minimum	Maximum	Mean	S.D.
Opportunity - Digitalization reduces working time.	187	1	5	3.84	.896
Risk - Digitalization expands working time (work from anywhere and at any time).	187	1	5	4.00	.823

Note: N = the population size; Mean = Average of a data set; S.D. = Standard Deviation

The interpretation of the mean score followed the level described by Landell (1997, as cited in Abdul Halim et al., 2017; Hairuzila & Muhammad Ridhuan Tony Lim, 2018), which are low (i.e. 1.00 - 2.33), medium (i.e. 2.34 - 3.67) and high (i.e. 3.68 - 5.00), respectively.

In terms of working time, the questionnaire assessed respondents' opinions from both, the opportunity and risk perspectives. The mean score showed that respondents considered digitalization as a high opportunity to reduce the working time (mean = 3.84). This may be in terms of time saved due to usage of technological tools as compared to work performed manually. Large data set can be extracted speedily and accountants' role can be performed more efficiently through major technologies such as Robotic Process Automation (RPA), Blockchain and Artificial Intelligence and Data Analytics (AIDA). With the use of advanced technology that reduces working time, the accountants may then focus on more impactful tasks. Accountants now have more time to devote to forward-looking advising assistance and other services due to digitalization (Smith, 2018).

On the other hand, respondents assessed digitalization expands working time as high risk (mean = 4.00) as in a digital environment, work can be performed from anywhere and at any time. For example, employees may need to abide with the job instructions over their weekends in catching up with immediate deadlines. The risk may jeopardize the quality of life and lead to various health problem including depression, stroke, hypertension and many others. According to Ogawa et. al (2018), the beginning of depression symptoms was significantly correlated with working excessively long hours. However, the impacts of working long hours are complex in that they may differ significantly for various working populations depending on criteria including gender, age, working conditions, and other variables (Ganster et al., 2018).

In short, the future accountants opined on the impact of digitalization on working time as both opportunity and risk to the accounting profession.

Conclusion

Digitalization or digital transformation has changed the business environment and daily routine, which can lead to new opportunities and increased risk for both firms and people. Thus, this study aims to examine the opportunity or risk that digitization poses to working hours from the perspective of future accountants. The results demonstrate that upcoming accountants see the impact of digitization on working hours as both a chance and a risk for the accounting industry.

The respondents saw increasing working hours as a risk because it may have an impact on their quality of life or health issues, however, they view the flexibility of working hours and

location as an opportunity because it allows for access to work from any location. Managers must fully understand these concerns in order to minimize risks and enhance good outcomes because workplace digitization brings both opportunities and problems.

This study was conducted on accounting interns from some public universities, thus to enrich the results, future research might include accounting interns from private universities. In addition, future study's focus could be broadened to include an evaluation of accounting practitioners' perspectives on the benefits and risks of the accounting profession's digitalization.

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