

Digitalization of Accounting Profession: An Opportunity or a Risk for Future Accountants? [†]

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Abstract: IR4.0 has transformed the global industrial landscape including the accounting profession. Thus, accountants have significant opportunities to enhance their digitalized skills and knowledge but are at risk if they do not comprehend how the workplace is transforming. Different genders may have divergent perspectives concerning opportunities and risks posed by the digitalization process. This study examined both the perception of opportunity or risk about the digitalization of the accounting profession and the effect of gender on such perception. Online questionnaires were distributed to 546 accounting interns from the Malaysian top six accounting and finance public universities. Findings revealed that the digitalization of the accounting profession presents future accountants with both significant opportunities and risks, but no significant difference in gender regarding such perceptions.



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1. Introduction

In previous decades, technological advancements occurred at a rapid rate. Given the exponential rate of technological advancement, it is not surprising that many aspects of human life are influenced by technology. Specifically, IR4.0 has transformed the global industrial landscape to rely heavily on digital software and the automation of robotic functions to replace human tasks [1]. The accounting profession is not an exception in this scenario. There are five stages of accounting evolution based on the technical and technological components: traditional manual, mechanized, automated, robotic, and artificial intelligence-assisted accounting [2]. Professionals appear to be receptive to the idea of automating relatively menial and repetitive tasks because the IT infrastructure enables them to assume more important responsibilities [3].

Due to digitalization, aspiring and experienced accountants must equip themselves to meet the changing demands of the accounting profession. There is a significant opportunity for accountants to increase their level of expertise, particularly in terms of digitalization skills and knowledge, which may give the impression that future accounting tasks will be more difficult [4]. Accountants, on the other hand, put themselves at risk as financial professionals at the core of organizations if they do not comprehend how the workplace is changing due to technology and digital transformation [5]. Given that technological innovation is driving the digitalization of the accounting profession, the gender of future accountants may influence their perception of the opportunity or risk posed by the digitalization process. Consequently, the objectives of this study are twofold: to evaluate the

perception of opportunity or risk associated with the digitalization of the accounting profession and to investigate the effect of gender on this perception among future accountants. Accounting interns are considered future accountants because they are the accounting students who will soon enter the field [6]. Internships provide students with educational experiences related to specific jobs, positions, occupations, and professions [7]. Subsequently, they can increase their abilities through real-world experience and the knowledge gained from their employers.

This research is guided by the Technology Acceptance Model (TAM), a model developed by [8] based on a psychological theory known as the Theory of Reasoned Action (TRA). In explaining people's actions, the TRA recognized a causal relationship between various factors including beliefs, attitudes, intentions, and behaviors [9]. TAM is the most prevalent model for describing technology adoption at all organizational and individual levels [10]. According to TAM, the more willing users are to use a new system, the more time they will invest in learning and adopting it over the old system [11]. Perceived ease of use and perceived utility are the two proposed primary factors of IT adoption in this hypothesis. In other words, according to TAM, a person's intention to utilize technology is explained and predicted by his perception of IT's utility and simplicity.

The following section examines prior research on the digitalization of the accounting profession and the associated opportunities and risks. The sections that follow elaborate on the study's methodology, analysis, and discussion of findings, as well as its limitations and conclusion.

2. Literature Review

Digitalization is the use of digital technologies to modify a business model and generate new revenue and value-generating opportunities; it is the transition to a digital business [12]. It implies that more responsibilities will be delegated to Internet-connected software applications. With the push toward digitalization of the accounting profession, the accounting industry is anticipated to undergo parallel transformations [13]. To meet the requirements of a variety of business models, several digital technology advancements are available, such as its adoption in accounting, FinTech industries, Big data and data analytics (BDA), artificial intelligence (AI), and cloud adoption.

2.1. Digitalization of the Accounting Profession

The accounting industry is expanding and improving. Due to technological advancements and shifting consumer expectations, the scope of accountants' work is expanding. Thus, the scope of an accountant's job should expand and become more adaptable to technological advancements and digitalization, as the accounting profession now employs several automated systems that did not exist ten years ago [14]. With the implementation of digitalization in the accounting industry, accountants' work has radically shifted to become increasingly dependent on the development of modern equipment and technology.

As the effect of digitalization, people's thinking and accounting practices have also changed [15]. Together with the adoption of technology in the accounting industry, it is anticipated that the number of jobs offered for accountants with programming and analysis skills will decline. Therefore, it is necessary and desirable for businesses to provide current employees with sufficient retraining [10]. Appropriate training not only boosts employees' confidence but also improves the comprehension of their responsibilities and the information and skills required to perform their duties.

2.2. Opportunities and Risks in Digitalization

Due to technological advancements, globalization, and increased competition, careers are constantly changing. According to [16], 702 job titles are at risk of being automated, with accounting having the highest probability of being automated and digitized in the near future. In the coming years, many accounting transactions will be handled by artificial intelligence and automation systems [14]. Digitalization could be viewed as an opportunity

or a threat within the accounting profession. When accountants acquire new skills, particularly in engineering, that will aid the emergence of new types of accounting professionals, there is an opportunity [17]. If accountants do not comprehend how technology and digital transformation are transforming the workplace, they place themselves at risk as the financial experts at the core of organizations [5]. Table 1 summarizes the most prevalent digitalization opportunities and risks.

Table 1. Opportunities and risks in digitalization.

Opportunities	Risk
Creation of new jobs	Destruction of jobs
Working time reduction and increased work autonomy	Working-time extension—an increase of ‘anytime, anywhere’ work
New forms of collaboration and cooperation between workers and machines	Weakening of workers’ representation and bargaining coverage
Better ergonomics due to support in performing heavy and complex work	Increased competition between workers to reduce costs
Smart factories—jobs that have been offshored to low-pay countries will come back	Work intensification, dependence on ‘data masters’ and surveillance
More gender equality	Increased inequality between workers
Sharing economy	Erosion of tax base and social insurance financing

(Source: [18]).

According to a World Bank study, Malaysian companies are less likely to invest in upskilling and innovation than companies in countries that have successfully achieved high-income status [19]. Only 18.5% of businesses offer staff training, compared to an average of 40% in countries that Malaysia should use as a benchmark. Consequently, digital capabilities will increasingly determine which businesses create or lose value [20]. Soon, technological progress and digitization will have a significant impact on the accounting profession [17], and therefore, the digital journey is significant, as it is a crucial element of the company’s success and the new accounting system. Thus, the purpose of this paper is to evaluate, from the perspective of future accountants, the perception of opportunity or risk associated with the digitalization of the accounting profession.

2.3. Gender and Technology

Gender is one of the most frequently studied personal variables in the literature on business ethics [21–26]. Both the gender socialization and structural approaches explain gender differences in values and work interests [27]. The gender socialization method emphasized how early socialization influences the ethical perspectives of women and men [28]. In contrast, the structural approach asserted that occupational duties would mitigate any gender disparities resulting from early socialization, with males and females in specific occupations making comparable work-related decisions [29,30].

In a review of research on technology usage and intention to use technology from a gender perspective, gender was identified as a significant factor in understanding human acceptance of technology [31]. In a variety of areas, including email, information seeking, online learning, communication technology, and online shopping behavior, the differences between men and women have been studied, with the majority of research focusing on men [32]. Females are more concerned than males with the use of information technology (IT), and this trait influences females’ self-efficacy, resulting in a greater awareness of the effort required to use computers. Concerning the use of information technology, females are more anxious than their male counterparts, and this anxiety affects their self-efficacy, resulting in a greater estimation of the effort required to use IT [8].

Females are also more prone to computer anxiety, ineffective computer use, and negative attitudes toward computer use ([33] as cited in [31]). Moreover, reference [34] (as cited in [31]) suggests that female entrepreneurs face greater obstacles in terms of sociocultural issues, education, and technology than their male counterparts. Males have a more positive outlook on the use of technology than females, according to [35], who summarized a meta-analysis of 17 years of prior research. Teachers can persuade male students to embrace technology in the classroom by highlighting its significance to their future [36]. In the correlation matrix, gender was linked to various variables of access, use, and literacy, just as age was. In the route analysis, however, the only direct gender influence is on risky encounters: boys are more likely than girls to encounter online dangers [37].

Statistically, there is no difference between male and female students’ attitudes toward technology [38]. An online survey reveals that females and males are equally optimistic about embracing technology. According to [39], the notion that women are less willing to use technology is false. Gender has no direct influence on the number of online experiences pursued [37]. Understanding the reasons for gender differences in the acceptance of new technologies will aid in the overall development of the technology ([34] as cited in [31]). Consequently, this is an opportune time to investigate the effect of gender on the perception of opportunity or risk associated with the digitalization of the accounting profession.

Thus, there are two hypotheses developed for this study, which are:

H1. *There is a significant positive relationship between gender and perception of opportunity in the digitalized accounting profession.*

H2. *There is a significant positive relationship between gender and perception of risk in the digitalized accounting profession.*

3. Research Methodology

3.1. Sample and Data

Future accountants are used as the unit of analysis based on a non-probability purposive sampling method. This study viewed accounting interns as future accountants because they are accounting students who will soon enter the profession [6].

Participating in the internship program were senior accounting students from the top six public universities for accounting and finance in Malaysia. According to information gathered from Internship Coordinators, the total number of interns was 546. Thus, the study’s sample size was 226 [40]. The online questionnaires were distributed through direct communication with the Internship Coordinators at each of the six public universities. The data collection period lasted approximately two months, with 187 of 546 questionnaires (or 34.25 percent) being returned.

3.2. Measures

The questionnaire assessed responses based on demographic data and respondents’ perspectives on the digitization of the accounting profession. Five measurement items were used to evaluate the respondents’ opinions from the perspectives of “opportunities for future accountants” and “risk for future accountants” Adapted from [18], all ten items were scored on a five-point Likert scale ranging from “1: Strongly disagree” to “5: Strongly agree”. The items for the variables are listed in Table 2.

Table 2. List of items.

Opportunities for Future Accountants	<ol style="list-style-type: none"> 1. Digitalization creates more new jobs. 2. Digitalization reduces working time. 3. Digitalization raises more work autonomy. 4. Digitalization provides better agronomics. 5. Digitalization enhances gender equality for women in work.
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Table 2. *Cont.*

Risks for Future Accountants	<ol style="list-style-type: none"> 1. Digitalization introduces challenges to the work. 2. Digitalization raises job instability. 3. Digitalization expands working time 4. Digitalization would increase the 5. Digitalization increases competition among employees.
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(Source: adapted from [18]).

4. Analysis and Findings

SPSS was used to conduct analyses based on 187 (or 34.25 percent) of the returned questionnaires. These included an analysis of demographic data, a mean score to determine the level of opportunity and risk associated with the digitalization of the accounting profession, and an independent *t*-test to determine whether there is a statistically significant difference in opportunity and risk associated with digitalization between male and female respondents.

4.1. Respondents’ Profile

A total of 149 (79.68 percent) of the respondents were females, whereas only 38 (20.32 percent) were males. The majority of respondents (157 or 83.96 percent) were between the ages of 20 and 24 and 182 of them (97.3 percent) had internships lasting between 3 and 6 months. The majority of respondents were Malay (148, or 79.1 percent), followed by Chinese (18, or 9.6 percent). All respondents were Bachelor of Accountancy students at their respective universities.

The majority of interns are attached to Audit firms (116 or 62.03 percent), followed by Private Firms (36 or 19.25 percent). Other employers include Federal Government Agencies, State Government Agencies, Financial Institutions, and Others, which include Tax firms and Essential services firms. Selangor (48 or 25.7 percent) and Kuala Lumpur were where the vast majority of employers are based (43 or 23 percent). Only 21 (11.2 percent) of employers were located in Johor, while less than 10 percent were located in other states. The demographic information demonstrates the credibility of the respondents as study participants.

4.2. Reliability of the Instrument

The measurement of reliability was Cronbach’s Alpha, with values above 0.7 considered acceptable and values above 0.8 being preferred [41]. The values in Table 3 indicate that all questionnaire items were reliable for further analysis.

Table 3. Reliability statistics.

	Cronbach’s Alpha	Cronbach’s Alpha Based on Standardized Items	N of Items
The opportunity for the digitalized accounting profession	0.734	0.748	5
Risk of the digitalized accounting profession	0.848	0.848	5

4.3. Mean Score for Opportunity and Risk of the Digitalized Accounting Profession

The respondents’ perspectives on the digitization of the accounting profession were evaluated based on the opportunities and risks for future accountants, as shown in Table 4. The interpretation of the mean score level adheres to the level used by ([42], as cited in [43,44]), with low (i.e., 1.00–2.33), medium (i.e., 2.34–3.67), and high (i.e., 3.68–5.00), respectively. Table 4 displays the mean scores for each item, as well as the overall mean scores for the opportunities and risks of digitalization of the accounting profession.

Table 4. Mean score.

	N	Min	Max	Mean	S.D.
1. Digitalization creates more new jobs.	187	1	5	3.67	0.925
2. Digitalization reduces working time.	187	1	5	3.84	0.896
3. Digitalization raises more work autonomy.	187	2	5	3.91	0.731
4. Digitalization provides better agronomics (support in performing heavy, dangerous, or complex work).	187	2	5	3.94	0.752
5. Digitalization enhances gender equality for women in work.	187	1	5	3.76	0.804
The opportunity for the digitalized accounting profession	187	2.40	5	3.82	0.574
1. Digitalization introduces challenges to the work.	187	1	5	3.87	0.747
2. Digitalization raises job instability.	187	1	5	3.63	0.860
3. Digitalization expands working time (work from anywhere and at any time).	187	1	5	4.00	0.823
4. Digitalization would increase the workload (work intensification, dependence on ‘data masters’ and surveillance).	187	1	5	3.81	0.877
5. Digitalization increases competition among employees.	187	1	5	3.87	0.833
Risk of the digitalized accounting profession	187	1.00	5	3.84	0.653

Note: N = population size; Min = Minimum; Max = Maximum; Mean = Average of a dataset; S.D = Standard Deviation. (The first highlighted row represents the opportunity and the second highlighted row represents the risk).

The results indicate the highest mean for opportunity (i.e., 3.94) is for item 4 (Digitalization provides better agronomics). The respondents perceived digitalization as an opportunity that provides support to complex work. As for risk, the highest mean (i.e., 4.00) is for item 3 (Digitalization expands working time). The respondents perceived digitalization as a risk that expands the working time because the digitalized environment enables work to be performed from anywhere and at any time.

Comparing the overall mean, the score of 3.82 for the opportunity and 3.84 for risk reflect the respondents’ strong belief that the digitalization of the accounting profession presents future accountants with both high opportunities and risks. Consistent with the perception that accountants’ jobs will become more difficult in the future, accountants have a significant opportunity to increase their level of expertise, particularly in digitalization skills and knowledge [4]. Digitalization will result in the automation of more mundane and repetitive tasks, allowing accountants to focus on value-adding opportunities for their organizations and their users [45].

As digitalization is unavoidable, future accountants should investigate all avenues for enhancing their technology knowledge and be prepared to use new technology in their personal and professional lives. Even though accountants will never become extinct, their numbers will decrease as their tasks become more automated and efficient [13]. Consequently, they will have to grow and change in tandem with technological advances. There are numerous opportunities for accountants to increase their level of expertise, particularly in terms of digitalization skills and knowledge, which could make their jobs appear more challenging in the future [4].

4.4. Gender Differences with Opportunity and Risk of the Digitalized Accounting Profession

An association between gender and opportunity of the digitalized accounting profession as well as between gender and risk of digitalized accounting profession among future accountants were examined and summarized in Table 5.

Male future accountants have a slightly higher perception of opportunity (M = 3.93; SD = 0.69) than female future accountants (M = 3.79; SD = 0.54), as shown in Table 5. Nevertheless, the difference is insignificant (Sig. 2-tailed value, $t = 1.129$; $df = 49.24$; $p = 0.265$). The magnitude of mean differences (mean difference = 0.14, 95 percent CI: -0.11 to 0.38) is very small (eta squared = 0.01).

In addition, male future accountants have a slightly higher risk perception (M = 3.98; SD = 0.59) than female future accountants (M = 3.79; SD = 0.59). However, it is not statistically significant (Sig. 2-tailed value, $t = 1.524$; $df = 185$; $p = 0.129$). The magnitude of the mean difference (mean difference = 0.18, 95 percent CI: -0.05 to 0.41) is very small (eta squared = 0.01).

Table 5. Independent *t*-test results.

		Group Statistics								
		Gender	N	Mean	Std. Deviation	Std. Error Mean				
The opportunity for digitalized accounting profession (D1OFA)	Male		38	3.9316	0.68856	0.11170				
	Female		149	3.7960	0.54051	0.04428				
Risk of digitalized accounting profession (D2RFA)	Male		38	3.9789	0.58962	0.09565				
	Female		149	3.7987	0.66556	0.05452				
		Independent Samples Test								
		Levene's Test for Equality of Variances			t-test for Equality of Means					
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
D1OFA	Equal variances not assumed	3.927	0.049	1.129	49.239	0.265	0.13561	0.12016	-0.10583	0.37704
D2RFA	Equal variances assumed	2.559	0.111	1.524	185	0.129	0.18029	0.11832	-0.05315	0.41373

Consequently, the findings indicate that there is no significant difference between male and female future accountants in their perceptions of opportunity and risk associated with the digitalization of the accounting profession. As the majority of respondents in this study (157 or 84 percent) were between the ages of 20 and 24 years old, this result may be reflective of the existing group of future accountants who are members of Generation Z. This generation is generally eager to explore new opportunities due to digitalization and keen to participate in the environment’s demanding nature.

Generation Z, born after 1995, is the post-millennial generation, who is more accustomed to using technology to communicate in social settings [46]. Generation Z, or Generation C [47] (connected, communicating, content-centric, computerized, community-oriented, clicking), is the first generation to be born between 1995 and 2009 [48] or 1995 and 2010 [49]. They are the first generation to grow up in a globally connected environment [50] where technology was readily available ([51] as cited in [52]). Given this generation’s extensive exposure to technology, gender indifference regarding the perceived opportunity and risk of a digitalized accounting profession is not unexpected. They are familiar with technology, flexible, adaptable, and able to quickly transition to new platforms [46].

In contrast, the findings contradict previous research that identified gender differences in technology. In the context of information technology, including computers, email services, electronic data management systems, and other related technologies, gender is a factor in technology adoption, with men being more technologically adept than women [31]. Moreover, gender differences serve as a moderator in the adoption of multimedia for learning [36]. The effect of task-technology fit on perceived usefulness is stronger in men than in women, leading to the conclusion that when the task and technology are a good match, men are more likely to perceive the technology as advantageous. Consequently, the findings of this study contribute to the body of evidence indicating that males and females compete for the best career success and that females no longer view technological progress negatively.

As they are members of Generation Z and were exposed to technology at a young age, the digitalization of the accounting profession is viewed as both an opportunity and a risk, depending on how they adapt to the new environment. Even women were just as eager to embrace technology in the digital age [39]. This may then provide companies with information about gender indifference that facilitates the selection and hiring of new employees to meet industry demands. Employers in both commercial and public accounting firms may therefore focus on developing programs and training newcomers’ abilities to use emerging ICT applications in line with digitalization.

5. Conclusions

This study discovered that the digitalization of the accounting profession presents both high opportunity and significant risk for future accountants, with the respective highest mean score items for the opportunity and risk being “Digitalization provides better ergonomics—support in performing heavy, dangerous, or complex work” and “Digitalization expands working time—work from anywhere and at any time”. However, gender differences did not affect the perceived opportunity or risk associated with the digitalization of the accounting profession.

The findings give beneficial insights into the educational systems and professional organizations. As future accountants viewed digitalization of the accounting profession as both high opportunity and high risk, the educational system could include more information on the opportunities and risks of digitalization in the curriculum to provide accounting graduates with better career planning guidelines. In addition, professional organizations may provide future accountants with greater exposure to the opportunities and risks of a digitalized environment. Thus, future accountants can have clearer perspectives and be better prepared for the actual digitalized workplace.

However, the current study is limited to students from some public universities, which may limit the applicability of the findings beyond the university setting. Future research could be extended to accounting interns at private universities, whose curricula may place a different emphasis than those at public institutions. Similarly, research may be conducted on current accounting practitioners, as they are potential mentors for newcomers. In addition, qualitative research methods, such as in-depth interviews, may be used to learn more about the anticipated opportunity or risk and changes in the roles of accountants in a digitalized environment. Finally, the findings may aid in the recruitment of new personnel, indicating that gender should not be the primary criterion for evaluating job applications from digital workplace newcomers. In other words, gender discrimination should not be an issue in the digitalization of the accounting industry.

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References

1. Sima, V.; Gheorghe, I.G.; Subić, J.; Nancu, D. Influences of the industry 4.0 revolution on the human capital development and consumer behavior: A systematic review. *Sustainability* **2020**, *12*, 4035. [CrossRef]
2. Bakulina, G.; Kalinina, G.; Luchkova, I.; Pikushina, M.; Gracheva, A. Transformation of the accountancy profession during digitalization of agriculture. *BIO Web Conf.* **2020**, *17*, 00188. [CrossRef]
3. Andreea, C.D.; Mihaela, N.A.; Elena, C.N.; Mugurel, T.M.; Nadia, P.A. An Investigation of the Perceived Impact of IT on the Accounting Profession. Available online: <https://cig.ase.ro/wp-content/uploads/2021/09/Codreanu.pdf> (accessed on 14 March 2022).
4. Moll, J.; Yigitbasioglu, O. The role of internet-related technologies in shaping the work of accountants: New directions for accounting research. *Br. Account. Rev.* **2019**, *51*, 100833. [CrossRef]

5. ACCA. *The Digital Accountant: Digital Skills in a Transformed World*; ACCA Global: London, UK, 2020.
6. Suhaiza, I. Effect of Ethical Ideologies on Ethical Judgment of Future Accountants: Malaysian Evidence. *Asian Rev. Account.* **2014**, *22*, 145–158.
7. Adeosun, O.T.; Shittu, A.I.; Owolabi, T.J. University internship systems and preparation of young people for world of work in the 4th industrial revolution. *Rajagiri Manag. J.* **2021**, *16*, 164–179. [[CrossRef](#)]
8. Venkatesh, V.; Morris, M.G.; Davis, G.B.; Davis, F.D. User acceptance of information technology: Toward a unified view. *MIS Q.* **2003**, *27*, 425–478. [[CrossRef](#)]
9. Lai, Y.L.; Lee, J. Integration of Technology Readiness Index (TRI) Into the Technology Acceptance Model (TAM) for Explaining Behavior in Adoption of BIM. *Asian Educ. Stud.* **2020**, *5*, 10. [[CrossRef](#)]
10. Zhang, Y.; Xiong, F.; Xie, Y.; Fan, X.; Gu, H. The Impact of Artificial Intelligence and Blockchain on the Accounting Profession. *IEEE Access* **2020**, *8*, 110461–110477. [[CrossRef](#)]
11. Mian, S.H.; Salah, B.; Ameen, W.; Moiduddin, K.; Alkhalefah, H. Adapting Universities for Sustainability Education in Industry 4.0: Channel of Challenges and Opportunities. *Sustainability* **2020**, *12*, 6100. [[CrossRef](#)]
12. Gartner Glossary. Available online: <https://www.gartner.com/en/information-technology/glossary/digitalization> (accessed on 24 May 2022).
13. Duong, D.C.T.; Fledsberg, K. *Digitalization of the Accounting Industry: The Influence Of Digitalization on the Accountants' Role and Their Self-Understanding. An Exploratory Study Based on 13 Norwegian Accounting Firms*; University of Agder: Kristiansand, Norway, 2019.
14. Tekbas, I.; Nonwoven, K. The Profession of the digital age: Accounting Engineering. In *IFAC Proceedings Volumes; Project: The Theory of Accounting, Engineering*; International Federation of Accountants: New York, NY, USA, 2018. Available online: <https://www.ifac.org/knowledge-gateway/preparing-future-ready-professionals/discussion/profession-digital-age-accounting-engineering> (accessed on 14 March 2022).
15. Fettry, S.; Anindita, T.; Wikansari, R.; Sunaryo, K. The future of accountancy profession in the digital era. In *Global Competitiveness: Business Transformation in the Digital Era, Proceedings of the First Economics and Business Competitiveness International Conference (EBCICON 2018), Bali, Indonesia, 21–22 September 2018*; Routledge-Taylor & Francis Group: London, UK, 2019.
16. Frey, L.; Botan, C.; Kreps, G. *Investigating Communication: An Introduction to Research Methods*, 2nd ed.; Allyn & Bacon: Boston, MA, USA, 1999.
17. Gulin, D.; Hladika, M.; Valenta, I. Digitalization and the Challenges for the Accounting Profession. *Entren.-Enterp. Res. Innov.* **2019**, *5*, 428–437. [[CrossRef](#)]
18. Voss, E.; Riede, H. *Digitalisation and Workers Participation: What Trade Unions, Company Level Workers and Online Platform Workers in Europe Think*; ETUC–European Trade Union Confederation: Brussels, Belgium, 2018.
19. Yeap, C. Malaysia's digital economy transformation needs more than great headlines. *Edge Wkly* **2021**. Available online: <https://www.theedgemarkets.com/article/malaysias-digital-economy-transformation-needs-more-great-headlines>. (accessed on 14 March 2022).
20. Hirt, M.; Willmott, P. Strategic principles for competing in the digital age. *McKinsey Q.* **2014**, *5*, 1–13.
21. Craft, J.L. A review of the empirical ethical decision-making literature: 2004–2011. *J. Bus. Ethics* **2011**, *117*, 221–259. [[CrossRef](#)]
22. Ford, R.C.; Richardson, W.D. Ethical decision making: A review of the empirical literature. *J. Bus. Ethics* **1994**, *13*, 205–221. [[CrossRef](#)]
23. Loe, T.W.; Ferrell, L.; Mansfield, P. A review of empirical studies assessing ethical decision making in business. *J. Bus. Ethics* **2000**, *25*, 185–204. [[CrossRef](#)]
24. Lopez-Nicolas, C.; Nikou, S.; Molina-Castillo, F.J.; Bouwman, H. Gender differences and business model experimentation in European SMEs. *J. Bus. Ind. Mark.* **2020**, *35*, 1205–1219. [[CrossRef](#)]
25. Lu, J.; Ren, L.; Zhang, C.; Wang, C.; Petkeviciute, N.; Streimikis, J. Gender difference in corporate social responsibility implementation in Lithuanian SMEs. *Oeconomia Copernic.* **2020**, *11*, 549–569. [[CrossRef](#)]
26. O'Fallon, M.J.; Butterfield, K.D. A review of the empirical ethical decision-making literature: 1996–2003. *J. Bus. Ethics* **2005**, *5*, 375–413. [[CrossRef](#)]
27. Betz, M.; O'Connell, L.; Shepard, J.M. Gender differences in proclivity for unethical behavior. *J. Bus. Ethics* **1989**, *8*, 321–324. [[CrossRef](#)]
28. Peterson, D.; Rhoads, A.; Vaught, B.C. Ethical beliefs of business professionals: A study of gender, age and external factors. *J. Bus. Ethics* **2001**, *31*, 225–232. [[CrossRef](#)]
29. Feldberg, R.L.; Glenn, E.N. Male and female: Job versus gender models in the sociology of work. *Soc. Probl.* **1979**, *26*, 524–538. [[CrossRef](#)]
30. Lacy, W.B.; Bokemeier, J.L.; Shepard, J.M. Job attribute preferences and work commitment of men and women in the United States. *Pers. Psychol.* **1983**, *36*, 315–329. [[CrossRef](#)]
31. Goswami, A.; Dutta, S. Gender differences in technology usage—A literature review. *Open J. Bus. Manag.* **2015**, *4*, 51–59. [[CrossRef](#)]
32. Orji, R.O. Impact of gender and nationality on acceptance of a digital library: An empirical validation of nationality based UTAUT using SEM. *J. Emerg. Trends Comput. Inf. Sci.* **2010**, *1*, 68–79.

33. Jackson, L.A.; Ervin, K.S.; Gardner, P.D.; Schmitt, N. Gender and the Internet: Women communicating and men searching. *Sex Roles* **2001**, *44*, 363–379. [[CrossRef](#)]
34. Mayoux, L. *Jobs, Gender and Small Enterprises: Getting the Policy Environment Right*; International Labour Organization (ILO) Working Papers; International Labour Office: Geneva, Switzerland, 2001.
35. Cai, Z.; Fan, X.; Du, J. Gender and attitudes toward technology use: A meta-analysis. *Comput. Educ.* **2017**, *105*, 1–13. [[CrossRef](#)]
36. Park, C.; Kim, D.G.; Cho, S.; Han, H.J. Adoption of multimedia technology for learning and gender difference. *Comput. Hum. Behav.* **2019**, *92*, 288–296. [[CrossRef](#)]
37. Livingstone, S.; Helsper, E. Balancing opportunities and risks in teenagers' use of the internet: The role of online skills and internet self-efficacy. *New Media Soc.* **2010**, *12*, 309–329. [[CrossRef](#)]
38. Verma, C.; Dahiya, S. Gender difference towards information and communication technology awareness in Indian universities. *SpringerPlus* **2016**, *5*, 1–7. [[CrossRef](#)]
39. Blasko, D.G.; Lum, H.C.; Campbell, J. Gender differences in perceptions of technology, technology readiness, and spatial cognition. *Proc. Hum. Factors Ergon. Soc. Annu. Meet.* **2020**, *64*, 1395–1399. [[CrossRef](#)]
40. Krejcie, R.V.; Morgan, D.W. Determining Sample Size for Research Activities. *Educ. Psychol. Meas.* **1970**, *30*, 607–610. [[CrossRef](#)]
41. Pallant, J. *SPSS Survival Manual*, 4th ed.; McGraw Hill: Berkshire, UK, 2010.
42. Landell, K. *Management By Menu*, 1st ed.; Wiley and Sons Inc.: London, UK, 1997.
43. Abdul, H.A.; Rahman, S.N.S.A.; Hamzah, M.H. Metacognitive skills of Malaysian students in non-routine mathematical problem solving. *Bolema Bol. Educ. Mat.* **2017**, *31*, 310–322. [[CrossRef](#)]
44. Hairuzila, I.; Muhammad, R.; Tony, L.A. Implementation of PBL to enhance the soft skills of engineering students. *SHS Web Conf.* **2018**, *53*, 03008.
45. Richins, G.; Stapleton, A.; Stratopoulos, T.C.; Wong, C. Big data analytics: Opportunity or threat for the accounting profession? *J. Inf. Syst.* **2017**, *31*, 63–79. [[CrossRef](#)]
46. Gabrielova, K.; Buchko, A.A. Here comes Generation Z: Millennials as managers. *Bus. Horiz.* **2021**, *64*, 489–499. [[CrossRef](#)]
47. Friedrich, R.; Le Merle, M.; Peterson, M.; Koster, A. *The Rise of Generation C. Implications for the World of 2020*: PwC; Booz Co.: New York, NY, USA, 2010; p. 24.
48. McCrindle, M.; Wolfinger, E. *The ABC of XYZ: Understanding the Global Generations*; McCrindle Publication: Bella Vista, Australia, 2009.
49. Seemiller, C.; Grace, M. *Generation Z Goes to College*; John Wiley & Sons: San Francisco, CA, USA, 2016.
50. Cilliers, E.J. The challenge of teaching generation Z. *PEOPLE: Int. J. Soc. Sci.* **2017**, *3*, 188–198. [[CrossRef](#)]
51. Turner, A. Generation Z: Technology and social interest. *J. Individ. Psychol.* **2015**, *71*, 103–113. [[CrossRef](#)]
52. Kirchmayer, Z.; Fratričová, J. What motivates generation Z at work? Insights into motivation drivers of business students in Slovakia. In *Proceedings of the Innovation Management and Education Excellence through Vision*, Milan, Italy, 25–26 April 2018; pp. 6019–6030.