



The Consequences of Work from Home Policy on the Productivity of Indonesian Accountants During the COVID-19 Outbreak

Amelia Setiawan¹, Hamfri Djajadikerta¹, Samuel Wirawan¹, Sandra Faninda¹,
Haryanto Haryanto^{2,*}

¹Accounting Department, Faculty of Economics and Business, Parahyangan Catholic University, West Java, Indonesia

²Accounting Department, Sekolah Tinggi Ilmu Ekonomi Mulia Singkawang, West Kalimantan, Indonesia

Email address:

amelias@unpar.ac.id (Amelia Setiawan), talenta@unpar.ac.id (Hamfri Djajadikerta), samuelwirawan@unpar.ac.id (Samuel Wirawan), sandrafaninda@unpar.ac.id (Sandra Faninda), haryanto2689@gmail.com (Haryanto Haryanto)

*Corresponding author

To cite this article:

Amelia Setiawan, Hamfri Djajadikerta, Samuel Wirawan, Sandra Faninda, Haryanto Haryanto. The Consequences of Work from Home Policy on the Productivity of Indonesian Accountants During the COVID-19 Outbreak. *International Journal of Economics, Finance and Management Sciences*. Vol. 11, No. 5, 2023, pp. 223-233. doi: 10.11648/j.ijefm.20231105.12

Received: August 27, 2023; **Accepted:** September 13, 2023; **Published:** September 27, 2023

Abstract: This research aims to evaluate the performance of accountants currently working remotely due to the COVID-19 pandemic and identify the factors that might influence their productivity. Although companies have been aware of the benefits of technology, they have not fully utilized it to optimize their operations until the pandemic hit in 2020. While previous studies have examined the impact of remote work in different regions, there is limited research on the accountancy industry in Indonesia. Therefore, this study aims to enhance our scientific understanding of this phenomenon. The research collected data from 186 accountants through a Google form using SEM-PLS and SmartPLS 4.0. The study also presents a model that demonstrates the connection between these competencies, their perceived significance, and productivity. Interestingly, the research discovered no significant correlation between accountants' technological and technical skills and online productivity. However, the study revealed that soft-skill accountants tend to be more productive. This finding underscores the importance of cultivating soft skills and technical and technological expertise in accounting. The study also found that 43% of the participants believed working from home would improve their productivity. These results suggest that companies should adopt a more flexible and remote work arrangement rather than adhere to a traditional office-based work culture. This research provides valuable insights into how the accounting industry can adapt and thrive in a remote work environment, given the unique circumstances of the COVID-19 pandemic.

Keywords: Accountant, Accountant Technical Competency, Information Technology Competency, Soft Skill Competency

1. Introduction

The industrial and digital revolutions have transformed the way humans work. However, the global pandemic has brought about a hybrid revolution, making it a significant milestone in human work. It has resulted in a global experiment, forcing people to adapt to new working methods, including accountants. As a result, accounting-related jobs, including management accountants and internal and external auditors, must adapt to working from home. With the pandemic ending,

the question arises whether accountants' work could continue in a hybrid manner or return to working from the office entirely [1].

This research assesses online accountants' productivity and the factors that impact it. This innovative research will contribute to the literature connecting accountants with job evaluation in the post-pandemic era, which has not been widely studied. Our findings will help individuals prepare to

remain productive during physical and remote work. These competencies are essential for work and business competition. Employers can use our research to make informed decisions about work methods involving accountants. Additionally, accounting associations can use our research to inform various policies for accountants, such as identifying essential competencies for their profession.

Forbes reports that Information and Communication Technology (ICT) has been a major driving force behind transformative changes in the global workforce. One significant development is the advent of Ubiquitous Voice-Powered Technology, which enables human voices to activate commands for AI-powered machines. This innovation is expected to yield numerous benefits, such as creating intelligent offices, improved reporting and data analysis, enhanced creativity and collaboration, more focused meetings, and greater efficiency. Despite recognizing these advantages, many organizations have yet to utilize ICT to optimize their work operations fully. However, the 2020 pandemic has spurred significant changes in this regard.

The pandemic has pushed organizations to change work methods; previously, work was done physically in their respective offices, forced to be done online in their respective homes per government regulations. These changes happen very quickly, and in some organizations, these changes run without adequate preparation and readiness. The Indonesian Financial Services Authority (OJK) also understands this situation.

OJK, via finance broadcast¹. OJK, through a press release conducted on March 18, 2020², announced the relaxation of the financial report deadline and the delayed schedule of a General Meeting of Shareholders (GMS) by two months, allowing an online GMS. The time extension granted by the OJK will also continue into the following year. Based on this OJK decision, it revealed that there were limitations such as accounting work must be done from home and other constraints.

However, on the other hand, based on a report from the Seattle Job Initiative [1], in the first seven weeks of the COVID-19 pandemic in America, 20 million people lost their jobs, which were routine jobs, such as bookkeeping and regular production. Work was initially almost always done from the office. When it had to be done from home, it created constraints from various things, but in the end, it could be done well without any problems.

Meanwhile, the opposite phenomenon was found, as quoted from the website Accounting Today, a site that focuses on accountants and their development; accountants are a rapidly growing profession in conditions of working from home³. Experts also support this statement, as shown on the Thomson Reuters website⁴, Flex Jobs⁵, and the University of Nevada

website⁶.

The previous study suggests that motivation plays a vital role in the effectiveness of the home scheme [2]. Therefore, it will be good to see the phenomenon from different perspectives. This research was to examine the effect of IT competency on online accountant work, accountant technical competency on online accountant work productivity, Soft skill competency on online accountant work productivity, perceptions about the importance of technical competency of accountants, perceptions about the importance of soft skill competencies to soft skill competencies; and the relationship between the factors that influence the work productivity⁷ of online accountants. In addition, this research also produces the correlation model among the various constructs used in the research hypotheses.

2. Theoretical Reference

2.1. Accountant Profession & Accountant Competence

As an accounting scholar, several career paths are available, including working as a public accountant in a public accounting firm, a management accountant in a company, a government accountant, or a forensic accountant [3]. Today, accountants can pursue various career developments, such as becoming Assurance Advocate, Business Transformers, Data Navigators, Digital Playmaker, or Sustainability Trailblazer [4]. These career options exhibit the environmental change and technological advancements in accounting.

The CGMA Competency Framework outlines accountants' necessary knowledge and skills, including goals, integrity, ethics, and dedication to ongoing learning and development [5]. As a professional accountant, it is essential to have a well-rounded set of competencies. These competencies cover five skill categories: digital, business, people, leadership, and technical. Each category plays a crucial role in being a successful accountant.

2.2. IT Competency

Digital skills or IT competence refers to the knowledge, abilities, and behavior required for effectively utilizing digital technology in communication, work, learning, and daily life. [6]. The digital skills gap refers to the difference between the digital skills that job seekers have and the digital skills that employers need [7]. According to a survey conducted by Infosys in 2020 [8], training learned or strengthened during this pandemic is workflow and collaboration tools, managing remote workers, managing distributed online teams, using video conferencing platforms or tools, and remote presentation tools.

A simple measurement of digital skills is done by

1 <https://www.ojk.go.id/id/tentang-ojk/Pages/Tugas-dan-Fungsi.aspx>

2 <https://www.ojk.go.id/id/berita-dan-kegiatan/siaran-pers/Pages/OJK-Longgarkan-Batas-Waktu-Laporan-Kuangan-dan-RUPS.aspx>

3 <https://www.accountingtoday.com/list/leading-accountants-in-a-work-from-home-environment>

4 <https://tax.thomsonreuters.com/en/accounting-solutions/c/how-accountants->

[work-from-home](#)

5 <https://www.flexjobs.com/blog/post/companies-hire-virtual-accounting-jobs/>

6 <https://onlinedegrees.unr.edu/master-of-accountancy/careers/working-from-home-virtual-accounting-jobs/>

7 <https://onlinedegrees.unr.edu/master-of-accountancy/careers/working-from-home-virtual-accounting-jobs/>

measuring the level of a person's habit of using the internet, email, and video calls [9]. In this study, digital skills are measured through computer competence, including the ability to operate Word processing, Email, Spreadsheets, Data Analysis, Web browsers, and HTML tools that refer to previous research on similar topics [10]. The previous research by Abobaker also suggests that accountant needs to use IT infrastructure more, given cloud and artificial intelligence, especially after COVID-19 pandemic [11].

2.3. Accountant Technical & Soft Skill Competency

Based on research conducted by Bappenas and the World Bank in 2020 [12], The workforce in Indonesia currently has more skills. However, there is a mismatch of skills with the requirement from the labor market, which is characterized by the difficulty for employers to find workers with high skills and the high unemployment rate in productive times, especially among the youth.

Professional accountants need technical skills to collect, store, process, and analyze information. This skill includes preparing and reporting reports for internal and external stakeholders, per professional accounting standards [5]. Individuals pursuing a career in the accounting field will need to possess various technical competencies. Some key areas of expertise include financial accounting and reporting, which encompasses preparing financial performance reports, such as balance sheets, income statements, and cash flow statements. Cost accounting and management proficiency are also crucial, involving analyzing and controlling organizational costs. Business planning is another essential skill set, as it involves creating strategies for the company's future direction. Management reporting and analysis is also vital, which involves gathering and analyzing data to inform decision-making processes. Strong corporate finance and treasury management knowledge is also necessary, as this involves managing the company's financial resources. Risk management and internal control knowledge is also essential, as it helps ensure that the company operates safely and competently. Accounting information systems are also critical in the profession, as they help manage financial data and ensure its accuracy. Finally, understanding tax strategy, planning, and compliance is essential to ensure that the company complies with all relevant regulations and laws [5, 10].

Soft skills encompass networking and communication abilities. The study measures soft skills based on a student's proficiency in various areas, including teamwork, adaptability, entrepreneurship, communication, creativity, critical thinking, IT, leadership, listening, numeracy, problem-solving, self-management, analytical, and interpersonal skills [5, 10].

2.4. Online Accountant Work Productivity

The future of work for knowledge workers lies in a hybrid work environment, which blends physical office work with remote work. While exclusively working from the office can lead to a shortage of skilled employees, and fully remote work can cause worker fatigue, a hybrid approach can balance both benefits [1]. One common myth is that employees are less

productive when working remotely. However, the solution to this belief is a hybrid work model [1]. This approach aligns with research from McKinsey, which conducted studies in eight countries [13].

2.5. SciencePG-Level2

Through a review of 157 literature sources, it was discovered that the fast-developing field of IT has a significant impact on the productivity of accountants [14]. This impact is evident through adopting accounting practices, where new tasks are assigned or old tasks are approached in new ways. By utilizing IT, accountants can complete their work more efficiently by performing the same tasks differently or by taking on new responsibilities that leverage technology, such as analyzing all data rather than just samples. IT competence encompasses knowledge, skills, and behavior related to using digital technology for work, learning, communication, and daily life [6] is critical in this context. According to a 2020 Infosys survey [8] 14% of respondents felt that working online allowed for better use of technology, 13% appreciated the flexibility it provided for completing individual tasks, and 12% highlighted the benefits of work-life balance. Based on the discussion, the first hypothesis is:

H1: IT competence positively affects the productivity of online accountant work

2.6. The Relationship Between Accountant Technical Competence and Accountant Work Productivity Online

Financial professionals require technical skills to effectively gather, store, process, and analyze information. Such information is then shared with relevant stakeholders, including the preparation and reporting of reports for both internal and external parties under professional accounting standards [5]. Performing these tasks is crucial for accountants to carry out their work. Thus, the second hypothesis of this study is based on the previously stated assumptions:

H2: Accountant's technical competency positively affects the productivity of online accountant work

2.7. Relationship between Accountant Soft Skill Competency and Accountant Work Productivity Online

Accountants require more than technical knowledge and expertise to excel in their jobs. Soft skills are also crucial. This study evaluates students' abilities in various soft skills, from teamwork, adaptability, entrepreneurship, communication, creative thinking, IT proficiency, leadership, numeracy, problem-solving, self-management, and analytical to interpersonal skills [5, 10]. As a result, the third hypothesis of this study is based on these assumptions:

H3: Soft skills positively affect the productivity of online accountant work

2.8. Relationship Between Perceptions About the Importance and Assessment of Accountants' Technical Competence

Individuals' pursuit of competency is influenced by how

much they value it. A recent study conducted in Romania on 138 people revealed that the perceived importance of technical competence directly impacted their accounting competency [15]. Based on these assumptions, the fourth hypothesis in this study is:

H4: Perceptions about the importance of the accountant's technical competence positively affect the accountant's technical competence assessment

2.9. Relationship Between Perceptions About the Importance and Assessment of Technical Competency of Accountants

Accountants aim to possess various soft skills that are crucial to their success. These skills include team collaboration, adaptability, entrepreneurship, effective communication, creative and critical thinking, IT proficiency, leadership, attentive listening, problem-solving abilities, self-management, analytical skills, and interpersonal skills [5, 10]. Consequently, the fifth hypothesis of this study is based on these assumptions:

H5: Perceptions about the importance of soft skills competency accountants positively affect the assessment of soft skills competency accountants

2.10. Relationship of Factors Influencing the Work Productivity of Accountants Online

52% of employees experienced increased productivity and workload while working from home during the pandemic, as per a survey conducted by Infosys in 2020. Conversely, only 35% felt the same, while the rest reported decreased productivity [8]. The sixth hypothesis in this study is:

H6: IT competency, accountant technical competence, and competence positively affect the productivity of online accountant work.

3. Methodology

The study involved 186 accountants who responded to the survey. Of these respondents, 34% were management/corporate accountants, 32% were public accountants, 11% were internal auditors, and others were consultants, tax consultants, analysts, or other accounting professionals. The survey showed that 35% of respondents had worked for 2-5 years, 31% less than two years, 22% for 6-10 years, 8% for 11-15 years, and the rest had worked for more than 15 years. The respondents were 57% female and 43% male.

For economic, business, and accounting studies, SMART PLS software is widely used for structural equation modeling analysis, as noted by Mohd Thas Thaker et al. [16, 17]. Two types of analyses are conducted using SMART PLS to analyze the model: the outer and inner models [16, 18]. The outer model identifies the relationship between

latent variables and observed indicators, while the inner model identifies the relationship between dependent and independent latent variables [17-19]. This study focuses on six latent variables: Productivity (PRO), IT Competency (KTI), Accountant Technical Competency (KTA), Perceptions of the Importance of Accountant Technical Competence (PKTA), Soft Skill Competence (KSS), and Perceptions About the Importance of Soft Skill Competence (PKSS).

Accountants were surveyed through online questionnaires to evaluate their productivity, with factors that included work speed, timeliness, and the number of jobs and hours completed. Their proficiency in IT and accounting was also assessed, covering databases, ERP, email, web browsers, spreadsheets, financial accounting, economics, entrepreneurship, financial reporting, strategic management, taxation, and other areas recommended by CGMA. Soft skills were equally evaluated, with adaptability, communication, leadership, problem-solving, and critical thinking among the assessment areas. The respondents also rated the importance of technical competence and soft skills in their field.

4. Results and Discussion

4.1. Results

In this study, statistical processing involved evaluating both the outer and inner models. The results of this evaluation were used to test the hypothesis and ensure that the model fits correctly.

Regarding productivity, the survey showed that 5% of respondents felt much more productive when working from home, 38% felt more productive, 33% felt no difference between working from home or an office, and 24% felt less productive when working from home.

4.1.1. Outer Model Evaluation

This study's outer model was evaluated using factor analysis [17], convergent validity test, and discriminant reliability [20].

Analytical Factor

Based on previous research [17], it is considered necessary to conduct initial testing in the form of exploratory factor analysis to identify whether there are indicators unsuitable to reflect latent variables. The reference used is that a loading value greater than 0.7 is considered eligible [17-18].

The results of the first processing shown in Figure 1 show cross-loading indicators that do not meet the requirements, so those that do not are omitted. Figure 1 shows the testing of the two SEM models. There are no indicators with a loading factor value below 0.7, so all indicators are valid.

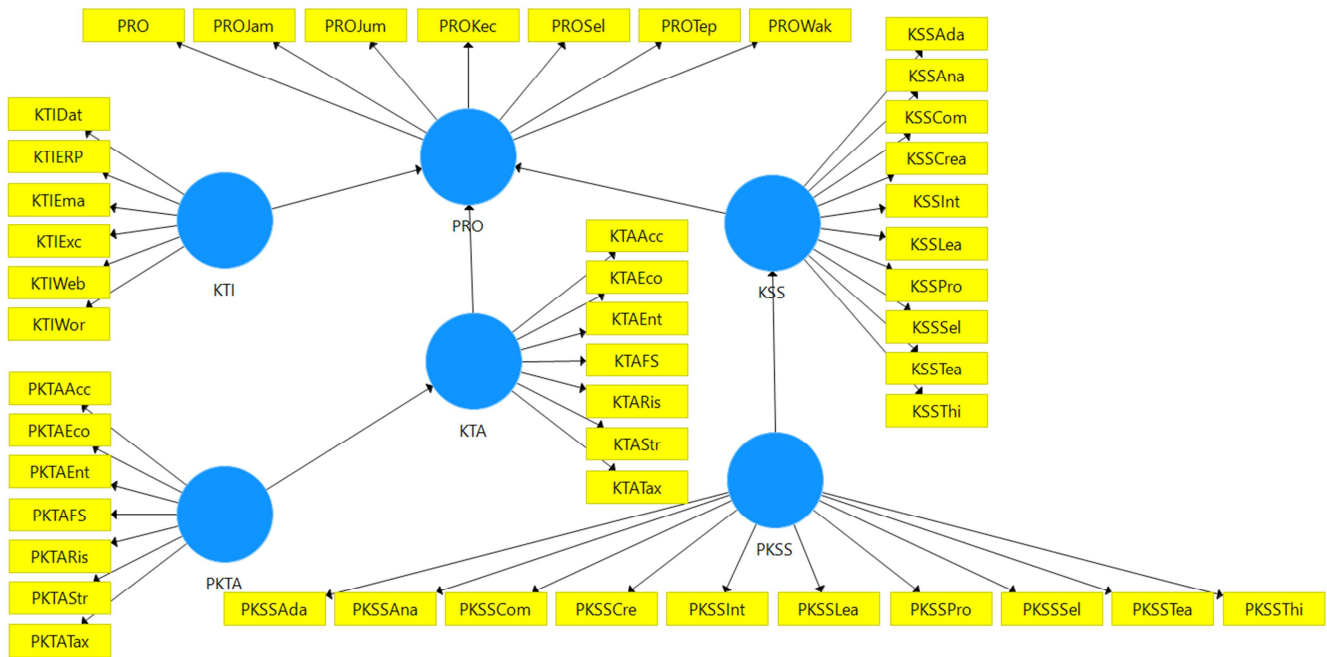


Figure 1. Structural Equation Model – Initial Test Results - Factor Analysis Source: Primary Data Processed - SMART-PLS.

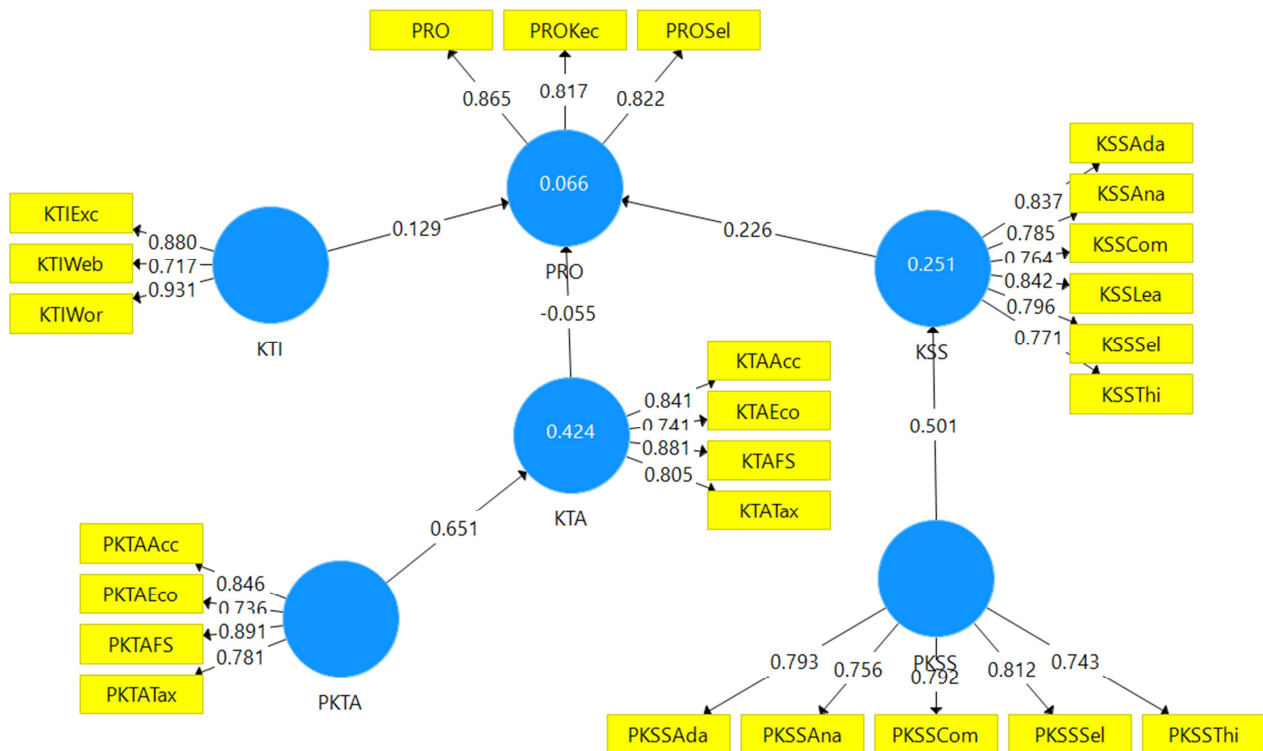


Figure 2. Structural Equation Model – Final Test Results - Factor Analysis. Source: processed SMART-PLS.

In this research model, productivity as an endogenous dependent latent variable reflects through two reflective indicators. As the dependent latent variable, competence is formed of three latent variables: 1. IT competence reflected through two reflective indicators; 2. The accountant's technical competence reflects through four reflective indicators; and 3. Soft skill competency reflects through six reflective indicators. Perceptions about the importance of accountants' technical competence reflect through four

reflective indicators, and perceptions about the importance of soft skill competencies reflect through five reflective indicators.

4.1.2. Convergent Validity

Table 1 displays the validity test result. To achieve this, three indicators - Cronbach's Alpha (CA), Composite Reliability (CR), and Average Variance Extracted (AVE) - were utilized. These indicators were compared against

reference values from previous research conducted by Mashal & Shuhaiber, Rafiq et al., and Rouf & Akhtaruddin [20-22]. The CA value must fall between 0.70 and 0.95, the CR value must exceed 0.70, and the AVE value must be greater than 0.50. After statistical analysis, the variable for this research

demonstrated a CA value ranging from 0.790 to 0.887, CR values exceeding 0.7, and AVE values exceeding 0.5, meeting the validity requirements. Therefore, it means that the indicators used to measure the constructs accurately reflect this variable).

Table 1. Convergent Validity Test Results.

Variable Name	Cronbach's Alpha	Composite Reliability	Average Variance Extracted
Soft skill competency	0.887	0.914	0.639
IT Competency	0.814	0.883	0.718
Accountant Technical Competency	0.835	0.890	0.670
The importance of soft skill	0.839	0.886	0.608
The importance of accountant technical competency	0.830	0.888	0.665
Productivity	0.790	0.873	0.697

4.1.3. Discriminant Reliability

When testing discriminant reliability, three indicators are used: the Fornel-Larcker criterion approach, cross-loading tests, and heterotrait-monotrait correlation ratios. The reference values for these indicators are as follows: for the Fornel-Larcker criterion test, the value must be the highest and above 0.7; for cross-loading testing, the highest value for the

indicator reflecting the construct must be above 0.7; and for the heterotrait-monotrait correlation ratio, the value must be lower than 0.85. Table 2 displays the results of the Fornel-Larcker criterion test, indicating that no construct has a value lower than 0.7, meeting the requirements for discriminant reliability based on the processed research data [16, 20-22].

Table 2. Fornel-Larcker Criterion.

	KSS	KTI	KTA	PKSS	PKTA	PRO
KSS	0.800					
KTI	0.190	0.847				
KTA	0.553	0.106	0.819			
PKSS	0.501	0.053	0.230	0.780		
PKTA	0.171	-0.016	0.651	0.417	0.815	
PRO	0.220	0.166	0.083	0.057	-0.002	0.835

Source: processed SMART-PLS

Table 3 displays the cross-loading test figures. The results mean that the highest value indicator accurately reflects the construct, with a value exceeding 0.7. Consequently, all

indicators meet the requirements of the cross-loading test, and they reflect their respective constructs. As a result, the discriminant reliability meets the required standards.

Table 3. Cross-loading Test.

	KTI	KSS	KTA	PKSS	PKTA	PRO
KTIExc	0.880	0.152	0.049	0.011	-0.053	0.131
KTIWeb	0.717	0.230	0.188	0.165	0.127	0.069
KTIWor	0.931	0.153	0.088	0.026	-0.039	0.184
KSSAda	0.169	0.837	0.467	0.477	0.189	0.214
KSSAna	0.188	0.785	0.533	0.368	0.156	0.273
KSSCom	0.146	0.764	0.355	0.374	0.113	0.087
KSSLea	0.153	0.842	0.450	0.381	0.116	0.133
KSSSel	0.128	0.796	0.433	0.400	0.124	0.169
KSSThi	0.123	0.771	0.399	0.385	0.108	0.152
KTA Acc	0.134	0.523	0.841	0.211	0.506	0.034
KTA Eco	0.003	0.343	0.741	0.157	0.509	0.123
KTA FS	0.114	0.474	0.881	0.244	0.635	0.066
KTA Tax	0.091	0.476	0.805	0.124	0.453	0.047
PKSSAda	-0.007	0.424	0.202	0.793	0.350	0.054
PKSSAna	0.057	0.355	0.147	0.756	0.314	0.035
PKSSCom	0.043	0.434	0.197	0.792	0.318	0.082
PKSSSel	0.002	0.390	0.201	0.812	0.354	0.076
PKSSThi	0.129	0.334	0.141	0.743	0.283	-0.043
PKTA Acc	0.006	0.131	0.510	0.411	0.846	-0.055
PKTA Eco	-0.088	0.085	0.467	0.280	0.736	0.069
PKTA FS	-0.002	0.216	0.634	0.384	0.891	-0.014
PKTA Tax	0.022	0.105	0.492	0.273	0.781	0.001
PROSel	0.152	0.181	0.044	0.083	-0.028	0.822

	KTI	KSS	KTA	PKSS	PKTA	PRO
PROKec	0.032	0.140	0.042	0.025	-0.026	0.817
PRO	0.183	0.210	0.107	0.028	0.033	0.865

Source: processed SMART-PLS

Table 4. Heterotrait-Monotrait Correlation Ratio.

	KSS	KTI	KTA	PKSS	PKTA	PRO
Soft skill Competency (KSS)						
IT Competency (KTI)	0.244					
Accountant Technical Competency (KTA)	0.641	0.181				
The importance of KSS (PKSS)	0.572	0.126	0.265			
The importance of KTA (PKTA)	0.189	0.113	0.767	0.494		
Productivity (PRO)	0.245	0.179	0.103	0.091	0.082	

Source: processed SMART-PLS

According to Table 4, the final test for discriminant reliability is the Heterotrait-Monotrait Correlation Ratio. This test requires a value of less than 0.85. After analyzing the research data, it was found that no construct had a Heterotrait-Monotrait Correlation Ratio value greater than 0.85. Therefore, it can be concluded that the discriminant reliability meets the requirements, and it can be stated that the discriminant in this study is significant.

4.1.4. Evaluation of the Inner Model/Structural Model

The research hypothesis evaluates the relationship between constructs with the inner model approach. The research hypothesis underwent bootstrapping [23-24]. Various tests

can be carried out, including examining the results of the Path Coefficient and the coefficient of determination to test the structural model [20, 21, 24]. Other tests include the effect size [18], model fit test, and Q-square [17].

(i). Hypothesis Test

The inner model review was done by hypothesis testing with the bootstrapping method to obtain the path coefficient and p-value values. The reference for this test is the p-value below 0.05 [20, 21] or the t-statistic value above 1.96 [24]. Table 5 displays the path coefficient and p-value for each relationship. Figures above 1.96 indicate that the estimated parameters are 95% valid.

Table 5. Path Coefficient.

Hypothesis	Relationship	Deviation Standard	T-statistic	p-Value	Result
H1	KTI → PRO	0.089	1.442	0.150	Rejected
H2	KTA → PRO	0.079	0.701	0.484	Rejected
H3	KSS → PRO	0.086	2.633	0.009	Accepted
H4	PKTA → KTA	0.051	12.679	0.000	Accepted
H5	PKSS → KSS	0.067	7.432	0.000	Accepted

Source: processed SMART-PLS

The sixth hypothesis, "IT Competency, Accountant Technical Competence and Competence directly affect the Productivity of Online Accountant Work," is tested by a fit model test. Model fit is tested by taking SRMR and Normed Fit Index (NFI) values as indicators to test model suitability, which ensures there are no specification errors in the model. [17]. The criteria for these two indicators are: the SRMR value cannot exceed 0.08, while the NFI value ranges between 0 and 1, assuming that the closer to 1, the better [17]. Table 6 exhibits the SRMR and NFI values.

Table 6. Model fit.

Saturated Model	
SRMR	0.074
NFI	0.655

Source: processed SMART-PLS

(ii). Coefficient of Determination (R2)

In this study, the R2 value for each endogenous construct measures the model accuracy, ranging from zero to one [17]. This value also indicates the influence of independent

variables on dependent variables. Interestingly, productivity has an R2 value of only 0.066, indicating that the model's accuracy for measuring productivity is not high when considering the factors of IT competence, accountant, technical, soft skill, and intensity of use of IT. However, Accountant Technical Competence and Soft Skill Competence endogenous variables have R2 values of 0.424 and 0.251, respectively, as shown in Table 7.

Table 7. R-square.

R-square	
KSS	0.251
KTA	0.424
PRO	0.066

Source: processed SMART-PLS

(iii). F-Value

In their study, Jumani and Sukhabot utilized both R Square and the processed F-value or effect size to assess the structural model [18]. An F-value of 0.02 or lower indicates a small effect. At the same time, a value of 0.15 suggests a moderate

effect and a value of 0.35 or higher indicates a strong effect. The researchers found that the effect on productivity had a small-level effect. In contrast, the influence of perceptions on competence had a significant effect, as shown in Table 8. From these findings, it can be concluded that all attitudes had a medium effect on the model.

Table 8. F-Value.

Effect Size (f square)	F-value
KSS → PRO	0.037
KTI → PRO	0.017
KTA → PRO	0.002
PKSS → KSS	0.335
PKTA → KTA	0.736

Source: processed SMART-PLS

(iv). Q-square

In addition to R-square and F-square, Sleimi and Emeagwali [17] utilize the Q-square value to determine a model's predictive relevance. A more than zero Q-square value signifies that the model can accurately predict each latent construct through its indicators [17]. According to Table 9, in this particular study, all indicators except for speed have a Q-square value greater than zero, indicating that most existing indicators can predict the latent construct. Based on the Smart PLS processing results, most indicators predict the latent construct effectively.

Table 9. Q-square.

Indicator	Q-square
KSSAda	0.209
KSSAna	0.128
KSSCom	0.124
KSSLea	0.154
KSSSel	0.129
KSSThi	0.136
KTA Acc	0.251
KTA Eco	0.247
KTA FS	0.190
KTA Tax	0.392
PROSel	0.011
PROKec	-0.025
PRO	0.005

Source: processed SMART-PLS

4.2. Discussion

The first hypothesis in this study is that IT competence affects the productivity of online accountants. Based on this research data, the first hypothesis cannot be proven to have a direct effect. This is contrary to previous research [25]. The difference with previous research can occur because IT competencies are not adequately prepared when facing the need to work from home during a pandemic. Adjustments are made suddenly so that the accountant does not judge that competence is a competency needed to work online. However, the role of accountants is even more substantial for organizations during this pandemic because much work is done online, so it needs better supervision. This is often an additional task for accountants in various companies [26].

In this study, the second hypothesis states that the Technical Competence of Accountants affects the Productivity of Online Accountant Work. However, it cannot be proven directly through statistics. There is no significant difference in the current work of accountants compared to before the pandemic, as some companies still require their employees to work from the office. Although the auditor utilizes online auditing, the methods and procedures remain the same, with only the audit documentation being carried out digitally. As a result, the accountants participating in this study do not perceive any difference in the technical competence of accountants.

The third hypothesis in this study is that soft skills affect the productivity of online accountant work. This hypothesis can be proven to have a statistically direct effect, aligning with previous studies [27]. Accountants who are respondents to this study realize that soft skill competence is vital to support their work productivity as accountants. This finding follows similar research conducted on accounting student respondents [28]. However, another essential thing obtained in this study is that not all soft skill competencies identified in previous research [10] can reflect the competence of soft skills in this study. One of them is leadership. This finding aligns with previous research, which found that there is a need for a mediating factor, namely experience to include leadership factors in soft skill competencies for accountants [29].

The fourth hypothesis in this study is that perceptions about the importance of accountants' technical competence affect the assessment of accountants' technical competence. This hypothesis can be proven to have a statistically direct effect. It can be concluded that the Perception of the Importance of the Accountant's Technical Competency encourages the accountant to strive for these achievements in his work, which ultimately supports his success. The study findings align with previous studies [30].

The fifth hypothesis states that an accountant's perception regarding the significance of soft skill competency affects the evaluation of their own soft skill competency. This hypothesis can be proven through a direct statistical effect. Thus, it can be inferred that recognizing the importance of soft skill competency motivates accountants to improve these skills, leading to their professional success.

The sixth hypothesis presented in the study posits that the proficiency of online accountants regarding their IT skills, technical competence, and overall competence significantly impacts their productivity. The researchers employed the Structural Equation Modeling Partial Least Squares (SEM PLS) method to investigate these variables' correlations. They evaluated the fit model to ensure it aligns with the study's objective: to identify a research model.

This study aimed to find a suitable model that accurately represents the relationship between factors such as IT Competence, Soft Skill Competence, Accountant Technical Competence, Perceptions of their Importance, as well as their impact on the Productivity of Online Accountants. The research model, shown in Figure 2, was developed based on data collected from 186 participants. The model met the required fit criteria, indicating that the relationships between

the variables were accurately mapped.

The coefficient of determination, which measures the effect of these variables on the Work Productivity of Online Accountants, was found to be low at 0.066. This suggests that the factors directly influencing the work productivity of online accountants have a low influence value. It can be concluded that IT competence, accountant technical competence, and soft skill competency do not significantly affect work productivity when working online. This may be because the accountants surveyed did not feel that working online required different competencies than working in person.

However, the perception of the importance of these competencies directly influences an accountant's strive for technical competence and soft skill competencies. The study found that some indicators, such as database and ERP competencies, do not necessarily reflect the technical competence of accountants, while some soft skills, such as creativity, interpersonal skills, problem-solving, leadership, and teamwork, do not significantly reflect soft skill competencies.

It can be concluded that working online reduces the need to work in a team, which is in line with qualitative research. Overall, the research model accurately represents the relationships between the variables, indicating that accountants strive for technical competence and soft skill competencies when working online [29].

Based on the results of the coefficient of determination (R^2) obtained from the processing of this research data, it can be concluded that the productivity of the accountants who were the respondents of this study was not directly influenced by IT competence, accountant technical competence, soft skill competence and the intensity of use of IT. Based on previous research, accountant productivity is influenced by organizational support, superior support, and business environment support [31]; cooperation and communication [15]; autonomy and workload [32]; and technology support provided by the company [33]. These results can have implications both for accountants and employers. For accountants, it is necessary to realize that the competencies, whether in the form of accountants' technical competence, soft skills, or IT, will not necessarily affect productivity. It needs environmental support, cooperation, and organization so that an accountant can produce adequate productivity. Meanwhile, from an employer's point of view, employers can consider the results of this study in designing a recruitment system. The current recruitment system often only emphasizes the competence of accountants and often forgets about other factors that can support an employee, in this case, an accountant, to remain productive, especially during a pandemic and post-pandemic.

5. Conclusion

5.1. Conclusion

The study explores various hypotheses regarding the factors that affect the productivity of online accountants. The first hypothesis suggests that IT competence has a direct impact on

productivity. However, the research data does not support this claim. The second hypothesis proposes that technical competence plays a role in determining productivity. However, it cannot be statistically proven to have a direct effect.

On the other hand, the third hypothesis demonstrates that soft skills significantly impact productivity. The accountants who participated in the study acknowledged the importance of soft skill competence in supporting their productivity. Similarly, the fourth hypothesis suggests that accountants' perceptions about the importance of technical competence can influence their assessment of their technical skills. This hypothesis has been statistically proven to have a direct effect.

Likewise, the fifth hypothesis indicates that perceptions about the importance of soft skill competence can influence accountants' soft skills assessment. This hypothesis has also been statistically proven to have a direct effect. Finally, the sixth hypothesis states that IT competence, technical competence, and soft skill competence can collectively impact online accountant work productivity. This hypothesis has been tested using SEM PLS. It has fulfilled the criteria for model fit, indicating that the relationship between variables has been accurately mapped in the model.

Through a review of 157 literature sources, it was discovered that the fast-developing field of IT has a significant impact on the productivity of accountants [14]. Compared with these studies, this study produces different phenomena. The differences in the results of this research can be caused by differences in culture and IT literacy in Indonesia.

The contributions of this research are as follows: 1. For regulators in the education sector, regulations need to be made that regulate the minimum requirements for teaching soft skills in accounting education so that soft skills can be used as a basis for future graduates to be even more productive; 2. For academics, it is necessary to ensure that material that emphasizes soft skills in the IT field and IT-related technical competencies is adequately included in the curriculum; 3. For practitioners, accountants must ensure that they have adequate IT competence and related soft skills in order to work more productively.

5.2. Limitations

One limitation of this research is that it only includes a small number of accountants as respondents, which may impact the accuracy of the results. Additionally, no previous studies have been conducted on accountants' IT competency, technical skills, and soft skill competence during pre-pandemic times or during normal working conditions. Other studies that have examined the direct effects of these competencies on accountant productivity can be used as a comparison to this study and as a basis for determining measurement indicators. Another limitation is that a significant portion (35%) of respondents have only worked for 2-5 years, which may introduce bias in the assessment due to their lack of experience working before the pandemic.

5.3. Future Research

This research can be valuable for academics as it

supplements other studies and can also be used as a foundation for comparative research. This comparative research can investigate similar variables but during regular work periods, without any adaptation period to new habits.

ORCID

Amelia Setiawan: <https://orcid.org/0000-0002-9386-7089>
 Hamfri Djajadikerta: <https://orcid.org/0009-0003-9474-1888>
 Samuel Wirawan: <https://orcid.org/0000-0002-0627-8439>
 Sandra Faninda: <https://orcid.org/0009-0002-2346-5743>
 Haryanto Haryanto: <https://orcid.org/0000-0002-9040-6578>

Acknowledgments

The authors thank all parties participating in this research, particularly Indonesian accountants as our respondents.

References

- [1] Cambon, A., & Waller, G. (2021). *Redesigning Work for a Hybrid Future* (Issue August).
- [2] Susanto, Y., Gunadi, Wicaksono, A., Murliasari, R., & Sampe, F. (2022). Employee Performance Analysis Along Work From Home During the COVID-19 Pandemic. *International Journal of Professional Business Review*, 7 (6), 1–24. <https://doi.org/10.26668/businessreview/2022.v7i6.e459>.
- [3] Weygandt, J. J., Kimmel, P. D., & Kieso, D. E. (2015). *Accounting principles* (12th ed.). John Wiley & Sons Ltd.
- [4] ACCA. (2020). *Future Ready: Accountancy Careers in The 2020s*. 1–72.
- [5] Chartered Global Management Accountant. (2019). *CGMA Competency Framework, 2019 Update*. 76.
- [6] Tuamsuk, K., & Subramaniam, M. (2017). The current state and influential factors in the development of digital literacy in Thailand's higher education. *Information and Learning Science*, 118 (5–6), 235–251. <https://doi.org/10.1108/ILS-11-2016-0076>.
- [7] Jarret, J. (2021). *Digital Skills Gap Index 2021*.
- [8] Klowden, K., & Lim, Q. (2021). *Insights for 2021 and Beyond*.
- [9] Setiawan, A., Djajadikerta, H., Haryanto, H., & Wirawan, S. (2021). Theory of Reasoned Action dan Literasi Teknologi terhadap Adaptasi Perubahan Teknologi. *Jurnal Sistem Informasi Bisnis*, 11 (1), 51–61. <https://doi.org/10.21456/vol11iss1pp51-61>.
- [10] Adhariani, D., Siregar, S. V., & Yulius, R. (2019). Borderless with unequal opportunity? experts' perspectives on the asean economic community and impact on indonesian accountant profession. *Qualitative Report*, 24 (5), 1147–1167.
- [11] Abobaker, A. G. E. (2023). THE IMPACT OF THE APPLICATION OF CORONA PANDEMIC (COVID-19) Article history: Cost of Equity; Firm Value; Financial Reports; Precautionary Measures; The Impact of the Application of Corona Pandemic (COVID-19) Precautionary Measures on the Preparat. *International Journal of Professional Business Review*, 8, 1–26. <https://doi.org/https://doi.org/10.26668/businessreview/2023.v8i8.1661.O>.
- [12] World Bank Group, Kementerian PPN/Bappenas, & Australian Government. (2020). *Indonesia's Occupational Employment Outlook - 2020 Technical Report*.
- [13] Lund, S., Madgavkar, A., Manyika, J., Smit, S., Ellingrud, K., Meaney, M., & Robinson, O. (2020). The Future of Work after COVID-19. In *McKinsey Global Institute* (Issue February).
- [14] Kroon, N., Alves, M. do C., & Martins, I. (2021). The Impacts of Emerging Technologies on Accountants' Role and Skills: Connecting to Open Innovation—A Systematic Literature Review. *Journal of Open Innovation: Technology, Market, and Complexity*, 7 (3), 163. <https://doi.org/10.3390/joitmc7030163>.
- [15] Mihai, F., Stan, M., Radu, G., & Dumitru, V. F. (2020). Heavy Work Investment for the Accounting Profession. *Amfiteatru Economic*, 22 (14), 1121–1139. <https://doi.org/10.24818/EA/2020/S14/1121>.
- [16] Mohd Thas Thaker, H., Khaliq, A., Ah Mand, A., Iqbal Hussain, H., Mohd Thas Thaker, M. A. Bin, & Allah Pitchay, A. Bin. (2021). Exploring the drivers of social media marketing in Malaysian Islamic banks. *Journal of Islamic Marketing*, 12 (1), 145–165. <https://doi.org/10.1108/JIMA-05-2019-0095>.
- [17] Sleimi, M. T., & Emeagwali, O. (2017). Do employee attitudes mediate the relationship between strategic human resource management practices and organizational effectiveness? A sem based investigation using SMART-PLS software. *Business and Economic Horizons*, 13 (1), 42–59. <https://doi.org/10.15208/beh.2017.04>
- [18] Jumani, Z. A., & Sukhabot, S. (2021). Identifying the important attitude of Islamic brands and its effect on buying behavioural intentions among Malaysian Muslims: A quantitative study using smart-PLS. *Journal of Islamic Marketing*, 12 (2), 408–426. <https://doi.org/10.1108/JIMA-09-2019-0196>
- [19] Iqbal, S., Martins, J. M., Mata, M. N., Naz, S., Akhtar, S., & Abreu, A. (2021). Linking entrepreneurial orientation with innovation performance in smes; the role of organizational commitment and transformational leadership using smart pls-sem. *Sustainability (Switzerland)*, 13 (8), 1–19. <https://doi.org/10.3390/su13084361>
- [20] Rafiq, M., Zhang, X. P., Yuan, J., Naz, S., & Maqbool, S. (2020). Impact of a balanced scorecard as a strategic management system tool to improve sustainable development: Measuring the mediation of organizational performance through PLS-Smart. *Sustainability (Switzerland)*, 12 (4), 1–20. <https://doi.org/10.3390/su12041365>
- [21] Mashal, I., & Shuhaiber, A. (2019). What makes Jordanian residents buy smart home devices?: A factorial investigation using PLS-SEM. *Kybernetes*, 48 (8), 1681–1698. <https://doi.org/10.1108/K-01-2018-0008>
- [22] Rouf, M. A., & Akhtaruddin, M. (2018). Factors affecting the voluntary disclosure: a study by using smart PLS-SEM approach. *International Journal of Law and Management*, 60 (6), 1498–1508. <https://doi.org/10.1108/IJLMA-01-2018-0011>
- [23] Arya Pering, I. M. A. (2020). Kajian Analisis Jalur Dengan Structural Equation Modeling (Sem) Smart-Pls 3.0. *Jurnal Ilmiah Satyagraha*, 3 (2), 28–48. <https://doi.org/10.47532/jis.v3i2.177>

- [24] Hermawan, R. T., & Hasibuan, S. (2016). Analisis Pengaruh Tingkat Pengalaman dan Coaching Style Terhadap Kualitas Kepemimpinan Manajer Proyek Dalam Upaya Peningkatan Produktivitas di PT. JCI. *Jurnal PASTI*, *XI* (1), 84–97.
- [25] Carvalho, C., & Almeida, A. C. (2022). The Adequacy of Accounting Education in the Development of Transversal Skills Needed to Meet Market Demands. *Sustainability*, *14* (10), 5755. <https://doi.org/10.3390/su14105755>
- [26] Kostyuchenko, V., & Kamil, A. (2020). Impact of COVID 19 on Trading Enterprise's Accounting Support of Controlling. *Journal of Economics and Economic Education Researc*, *21* (Impact of COVID-19 on Nursing time), 2020.
- [27] Krpálek, P., Berková, K., Kubišová, A., Krelová, K. K., Frendlovská, D., & Spiesová, D. (2021). Formation of professional competences and soft skills of public administration employees for sustainable professional development. *Sustainability (Switzerland)*, *13* (10). <https://doi.org/10.3390/su13105533>
- [28] Al-Tamimi, J. H. (2021). E-learning Of Auditing Under The Corona Pandemic And Its Compatibility With International Education Standard No 8 (ies8) Related To Auditor Competency Requirements. *Academy of Strategic Management Journal*, *20* (3), 1–17.
- [29] Oosthuizen, H., De Lange, P., Wilmshurst, T., & Beatson, N. (2021). Leadership-in-teams, ready, willing and able: perspectives of international accounting students. *Meditari Accountancy Research*, *29*(1), 161–182. <https://doi.org/10.1108/MEDAR-05-2019-0499>
- [30] Baker, R., & Wick, S. (2019). A narrative on integrating research and theory into undergraduate accounting curriculum. *Meditari Accountancy Research*, *27* (2), 325–344. <https://doi.org/10.1108/MEDAR-03-2018-0303>
- [31] Shil, N. C., Hoque, M., & Akter, M. (2021). Understanding management accountants' satisfaction: A conceptual study. *Journal of Accounting and Management Information Systems*, *20* (2), 221–263. <https://doi.org/10.24818/jamis.2021.02003>
- [32] Syrek, C., Kühnel, J., Vahle-Hinz, T., & Bloom, J. (2022). Being an accountant, cook, entertainer and teacher—all at the same time: Changes in employees' work and work-related well-being during the coronavirus (COVID-19) pandemic. *International Journal of Psychology*, *57* (1), 20–32. <https://doi.org/10.1002/ijop.12761>
- [33] Coman, D. M., Ionescu, C. A., Duică, A., Coman, M. D., Uzlaui, M. C., Stănescu, S. G., & State, V. (2022). Digitization of Accounting: The Premise of the Paradigm Shift of Role of the Professional Accountant. *Applied Sciences*, *12* (7), 3359. <https://doi.org/10.3390/app12073359>