# EMPOWERING MALAYSIAN AUDITORS OF TOMORROW: INSIGHTS FROM SOCIAL COGNITIVE THEORY ON FRAUD RISK ASSESSMENT

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***Abstract:*** *The revelation of a prominent corporate scandal due to decisions made by external auditors have highlighted a need to evaluate future auditors' risk judgment quality. This study investigates factors influencing the performance of accounting graduates' fraud risk judgment in Malaysia. Using Structural Equation Model, this study analysed the impacts of competency, digital technology skills, and academic performance on 106 respondents from various public and private universities in Malaysia. The results confirm that competency and digital technology skills significantly enhance fraud risk judgment consistency among accounting graduates. This finding aligns with the evolving business environment, where transactions predominantly occur on digital platforms, making digital skills essential. Higher learning institutions should focus on integrating digital technology skills into their programs to improve students' employability. This study also reveals that a high CGPA does not guarantee proficiency in fraud risk assessment. Therefore, education providers must develop programs that prioritise digital technology skills as a core learning outcome.*

***Keywords:*** *Graduates, Digital Technology Skills, Competency, Academic Performance*

## 1. Introduction

The Asia Pacific region has been identified as a region that has been significantly impacted by losses resulted from occurrences of occupational fraud (ACFE, 2024). According to the ACFE Report to Nation 2024, Malaysia has been identified among the top three country which recorded high number of fraud cases. This situation has cast a shadow over the reputation of audit profession. The auditing profession in Malaysia has faced substantial challenges due to a surge in fraud cases and auditors' inability to ascertain the „true and fair view“ of financial statements. Questions frequently arise about the efficacy of external auditors as a function, particularly in the context of assessing fraud risks (Mat Ridzuan et al., 2022).

Financial fraud scandals involving 1MDB and Serba Dinamik Berhad in Malaysia have prompted high public scrutiny regarding the quality of external audits in the country. The tremendous rise in litigation suits against external auditors highlights its seriousness, in which various companies are addressing these concerns with an emphasis of a growing commitment towards accountability and transparency (Mat Ridzuan et al., 2022). External auditors' failure to accurately detect fraud risk has significantly raised concern about its root cause (Kleinman et al., 2020). There is a crucial need for further exploration and resolution regarding the extent to which upcoming generations of auditors might contribute to the rising statistics of failure in fraud detection. Specifically, three (3) main objectives of this paper are: 1) To examine the effect of competency on accounting graduates' fraud risk judgment performance; 2) To examine the effect of academic performance on accounting graduates' fraud risk judgment performance, and 3) To examine the effect of digital technology skills on accounting graduates' fraud risk judgment performance. The findings of this study will be crucial to improve the quality of Malaysia future auditors.

Figure 1: Occupational Fraud Cases by Country

FIG. 72 CASES BY COUNTRY/TERRITORY IN THE ASIA-PACIFIC REGION

| Country or territory | Number of cases |
|---|---|
| Australia | 29 |
| Cambodia | 1 |
| China | 33 |
| Fiji | 1 |
| Hong Kong | 7 |
| Indonesia | 25 |
| Japan | 4 |
| Malaysia | 17 |
| Myanmar (Burma) | 1 |
| New Zealand | 8 |
| Papua New Guinea | 2 |
| Philippines | 12 |
| Samoa | 3 |
| Singapore | 15 |
| Solomon Islands | 1 |
| South Korea | 1 |
| Taiwan | 10 |
| Thailand | 9 |
| Vietnam | 4 |
| TOTAL CASES | 183 |

## 2. Literature Review and Hypothesis Development

### 2.1 Competency and Fraud Risk Judgment Performance

Hamilah et al. (2019) discovered that auditors' experience was directly linked towards their ability to detect fraud risk. An analysis by Mui (2018) suggested that auditors must make sure that they have the necessary skills and knowledge to appropriately assess fraud. Higher-capability auditors would typically maintain their professionalism and carry out examinations as detailed as possible to prevent serious misstatements in financial reporting. According to Sulistyowati and Supriyati (2015), competence plays a crucial role in enhancing auditors' accuracy and comprehension of information presented in financial reports, consequently bolstering the ability to uncover fraudulent activities.

Additionally, a highly competent auditor is adept at offering plausible explanations for errors found in financial statements. Social Cognitive Theory highlights the reciprocal relationship between personal factors and behavior. In the context of fraud risk judgment performance, this means that accounting graduates' judgments can be influenced by their personal characteristics, such as their knowledge, skills, and ethical values; as well as the organisational context in which they operate. Following Sulistyowati and Supriyati (2016) who collectively asserted that auditor competence significantly impacts the detection of fraud, this study expects that graduates would also need to develop their competency in terms of their knowledge and readiness before entering industry. As a result, expertise and knowledge are crucial to effective fraud detection. Consequently, this leads to the first hypothesis:

*H1: There is a significant positive relationship between competency and accounting graduates' fraud risk judgement performance.*

2.2 Digital Technology Skills and Fraud Risk Judgment Performance

Fraud has become more sophisticated and challenging to detect within the current Digital Technology (DT) environment. Lack of database management knowledge could cause the inability to detect fraud. It can be challenging for auditors to find fraudulent activities before they cause significant scandal that harms the brand of the company since fraudsters would occasionally hide their fraudulent operations in company databases (Bhasin, 2016). As such, artificial intelligence (AI) has been adapted to quickly analyse enormous amounts of data and increase the reliability of risk assessment (Nora et al., 2022). Kaplan and Haenlein (2019) corroborated by suggesting that the application of AI technology contributes to the enhancement of the accuracy and effectiveness of auditing process by detecting potential fraud on a company's books.

Social Cognitive Theory theorises that accounting graduates may observe and learn from digital devices that they use in daily life, such as smartphone and laptop. Through observing and learning from this digitalisation skills, they are able to acquire knowledge and skills related to fraud risk assessment and judgment. Mat Ridzuan et al. (2022) found that an effective technique of fraud risk assessment among external auditors requires digital technology skills. This is further supported by Kwarteng and Mensah (2022), who found that digital technology skills are the most demanded skills required by employers yet to be developed by accounting graduates. Consequently, graduates with good exposure to digital skills will be good in assuring the effectiveness of fraud risk assessment. This leads to the second hypothesis:

*H2: There is a significant positive relationship between digital technology skills and accounting graduates' fraud risk judgement performance.*

2.3 Academic Performance and Fraud Risk Judgment Performance

According to Kohlberg (1981), people with higher degrees of education are able to understand more complicated situations, which leads to higher levels of moral reasoning. It was thought that the better the degree of knowledge of the subjects studied, the higher the level of grades received by students, and vice versa. Furthermore, research on factors influencing the academic performance of accounting students, as discussed by scholars such as Ahinful et al. (2019), has yielded inconclusive findings (Fallan & Opstad, 2014). The intricacies surrounding students' performance would extend to their willingness to embrace change, adaptability, proficiency in complex decision-making, capacity to learn from mistakes, and the evolution of controlled beliefs and choices (Feldman et al., 2016). Based on Sekardevi (2023), graduates with high cumulative accomplishment index (GPA) are believed to have a superior understanding on how to judge fraud instances ethically. Thus, based on these studies, the following hypothesis is developed:

*H3: There is a significant positive relationship between academic performance and accounting graduates' fraud risk judgement performance.*

Drawing on the Social Cognitive Theory, three hypotheses has been developed, as illustrated by the theoretical framework in Figure 2.

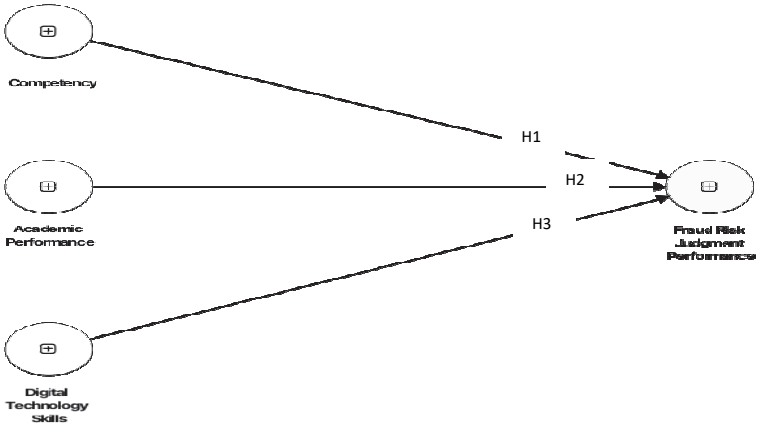


*Figure 2: Theoretical Framework*

## 3. Methodology

The population of this study are accounting graduates who graduated in 2023 from a higher learning institution in Klang Valley, Malaysia. Although this study noted that the total count of all graduates is accessible, the presence of these accounting graduates are not accessible to the public. Hence, it becomes a challenge for this study to track all graduates across all universities. This study prioritises the selection of accounting graduates due to their comprehensive academic preparation, specifically having successfully completed rigorous audit courses. Additionally, their practical training experience further enhances their proficiency in navigating real-world accounting scenarios.

Judgment sampling design becomes particularly useful when a limited subset of individuals possesses precise information that is being sought after by this study (Sekaran & Bougie, 2016). This study uses non-probability purposive sampling as its sampling method. This choice is supported by a previous study that had also utilised the same method for their study on audit judgment (Muttiwijaya & Ariyanto, 2019). Judgment sampling is a technique that involves selecting persons who are in the best position to provide specific information required for research (Sekaran & Bougie, 2016). These people are often picked because they are assumed to have specialist knowledge acquired from their own experiences and participation in relevant activities. In the context of this study, accounting graduates are the most appropriate source of „information inputs” for assessing risk judgment performance at an early level of profession. The unit of analysis is individuals, which focuses on accounting students who had just graduated from university and starting their first employment.

### 3.1 Measurement of Variable

The measurement for dependent and independent variables are discussed in this section.

#### 3.1.1 Fraud Risk Judgment Performance

Insufficient level of judgement performance is demonstrated by inconsistency, inaccuracy, and a lack of consensus among the auditors’ opinions (Trotman, 1998). Fraud risk judgment performance in this study focuses on the consistency of judgment made by accounting graduates. The consistency of judgment is measured based on consistent application of judgment rules and professional standards by an individual across time, or

across different problems and situations (Bonner, 2008). The consistency of fraud risk judgment in this study is hence measured based on the consistency of accounting graduates in their assessment of the level of risk as given by a scenario of control deficiency, as described in Table 1.

**Table 1:** Listing of Control Deficiencies

| No. | Test of Control Findings |
|---|---|
| | *Example: Building purchase wrongly classified to research and development* |
| 1. | Authority limits for procurement are not updated (manual and system) in line with the latest authorisation limit approved by the Board of Directors. Five out of ten properties purchased exceeded the manager's approval limit. |
| 2. | Three incidents of capital expenditure (all items above RM10,000 being declared expenses under „Miscellaneous Expenditure" in the Statement of Comprehensive Income). Payments were approved by the Head of Department. |
| 3. | Item disposal with prior approval from authorises personnel with no procedure for the sale of disposed assets (i.e. quotation from the potential buyer of wreckage, and recordings of the disposal's proceedings). |
| 4. | Insurance coverage for material properties that is not consistently monitored (i.e. expiry details, insurance coverage etc.) |
| 5. | Property, Plant and Equipment Listing does not tally with General Ledger. |
| 6. | Useful lives of assets are not consistently applied across similar assets. |
| 7. | Properties recorded in Property, Plant, and Equipment Listing do not exist. |
| 8. | Equipment not properly tagged. |

Source: Adopted from Razali et al. (2023)

The consistency of judgment is measured based on three questions (see Table 2). Respondents were asked to express their opinion on the level of risk associated with Property, Plant and Equipment using a scale of 1 to 7 (1 represents low risk, 4 represents moderate risk, and 7 represents high risk).

**Table 2:** Measurement of Consistency of Accounting Graduates' Fraud Risk Judgment

| | Details |
|---|---|
| 1. | Based on your judgment, what is the level of **fraud risk** for the procurement procedure? |
| 2. | Based on your judgment, what is the level of **control risk** for the procurement procedure? |
| 3. | Based on your judgment, what is the **overall risk rating** for the procurement procedure? |

3.1.2 Competency

An evaluation of education, experience, and frequency of using procedures to look for fraud in fraud investigations can be used to determine a person's level of proficiency. The measurement for competency was adapted from the study by Diez-Busto et al. (2023) to develop accounting students' professional competencies. On a 7-point Likert scale, respondents were asked to select the number that best represents how capable or incapable they perceive themselves (1 = strongly incapable to 7 = strongly capable). The degree to

which the state of general competencies in auditing applies to the respondents should be rated. The higher score shows that the individual has sufficient expertise. Table 3 depicts the measurement items for competency.

**Table 3:** Measurement of Competency

| No. | Items |
|---|---|
| 1 | I can understand a business nature during my practical training. |
| 2 | I could identify types of risk controls |
| 3 | I have knowledge of industry, regulatory and standards changes. |
| 4 | I have the ability on conflict resolution/ negotiation skills. |
| 5 | I have knowledge of accounting frameworks, tools, and techniques. |
| 6 | I am able to do analytical reviews and statistical sampling. |
| 7 | I am able to use financial analysis tools and techniques. |
| 8 | I have problem-identification and solution skills. |
| 9 | I am able to use data collection & analysis tools & techniques. |
| 10 | I have forensic skills and fraud awareness. |

Source: Diez-Busto et al. (2023)

3.1.3 Digital Technology Skills

For the valuation of accounting graduates' digital technology skills, this study measures more on how graduates would use technology as a medium in their learning process. Items used to measure digital technology skills were adapted from Krämer et al. (2014). AI is also included in the measurement as a form of exposure to graduates. This valuation serves as a benchmark for graduates when they join the industry. Respondents were asked to choose a number that reflects the extent to which they are capable or incapable with the given statements using 7-point Likert scales (1 being strongly incapable to 7 being strongly capable). In other words, a higher score signifies a stronger overall sense of digital skills in the individual. Table 4 depicts the measurement items for Digital Skills Technology.

**Table 4:** Measurement of Digital Technology Skills

| No. | Items |
|---|---|
| 1 | The online platform has encouraged me to contact peer graduates to work on team problems collaboratively. |
| 2 | I understand and use IT frameworks, tools and techniques. |
| 3 | I use electronic communications (e.g., Internet, e-mail) as a medium of learning process. |
| 4 | I can do data mining for my assignment. |
| 5 | I invested more time to study with the online platform than with the correspondence material. |
| 6 | I am very familiar with AI. |
| 7 | I use AI software in my daily tasks for doing my assignment. |
| 8 | The structure of the online offer is well-designed, and I could orient myself easily. |
| 9 | I had to learn a lot before I was able to use the online offer. |
| 10 | IT is a dynamic field; I study from time to time to remain updated to cope with fraud methods and fraud detection. |

Source: Krämer et al. (2014)

3.1.4 Academic Performance

The cumulative grade point average (CGPA) is used as a metric to assess a student's academic performance. The achievement index, according to Sekardevi (2023), is the most accurate indicator of academic progress. Academic performance is assessed in this study using CGPA. Based on the choices offered in the questionnaire, respondents would select the option that best represent their CGPA. The choices of CGPA are described in the Table 4:

**Table 4:** Measurement of Academic Performance

| No. | CGPA |
|---|---|
| 1 | Less than 2.0 |
| 2 | 2.0 – 2.59 |
| 3 | 2.60 – 3.09 |
| 4 | 3.10 – 3.59 |
| 5 | 3.60 – 4.00 |

Source: Sekardevi (2023)

## 4. Data Analysis

### 4.1 Descriptive Analysis

This study focuses on accounting graduates who were actively involved in risk judgment tasks. Respondents were selected from both private and public universities in Malaysia. The data collection phase lasted for 5 weeks, commencing on November 21, 2023 and concluding on December 29, 2023. Throughout this period, 435 survey questionnaires were distributed through various platforms, such as WhatsApp, LinkedIn, and Facebook. By the end of designated period, 106 responses were received, all of which were considered 100 percent usable. There was a total of 59 (55.7%) female respondents and 47 (44.3%) male respondents. The majority of participants, comprising 95 respondents (89.6%), belong to the Malay ethnic group. Following this, 7 respondents (6.6%) identify with the Indian ethnic group, and 3 respondents (2.8%) represent the Chinese ethnic group. Additionally, a minor proportion of 0.9 percent is contributed by a single respondent from other ethnicities. Looking at the level of education, 83 percent or 88 of respondents possessed a bachelor's degree. This is followed by respondents holding a master's degree, who accounted for 7.5 percent or 8 respondents of the sample. There was a total of 10 (9.5%) respondents with other qualifications taking part in this study. Looking at these findings, respondents have appropriate qualifications which enables them to carry out risk assessments. In terms of job position, 39.6 percent or 42 respondents held positions as account executive, while 8.5 percent or 9 respondents held positions as junior auditor and costing executive. Postgraduate students, professional certificate students and final year degree students contributed 6 respondents (5.7%) and 10 respondents (9.4%), respectively. Meanwhile, tax executive and risk management executive consisted of 5 respondents (4.7%) and 1 respondent (0.9%), respectively. Finally, 23 respondents or 22.7 percent of the respondents hold other positions.

### 4.2 Regression Analysis

This study makes use of partial least squares (PLS) modelling using SmartPLS version 4.1.0.6 (Ringle et al., 2024) as the statistical tool to examine the measurement and structural model, as it does not require a normality assumption and survey research is

normally not normally distributed (Chin et al., 2003). This study follows suggestions by Anderson and Gerbing (1988) to test the developed model using a two-step approach. First, the measurement model was used to test the validity and reliability of instruments used, following the guidelines of Hair et al. (2019) and Ramayah et al. (2018). Afterwards, this study used the structural model to test the hypothesis developed.

4.2.1 Measurement Model

For the measurement model depicted in Figure 2, this study assessed the loadings, average variance extracted (AVE) and composite reliability (CR).

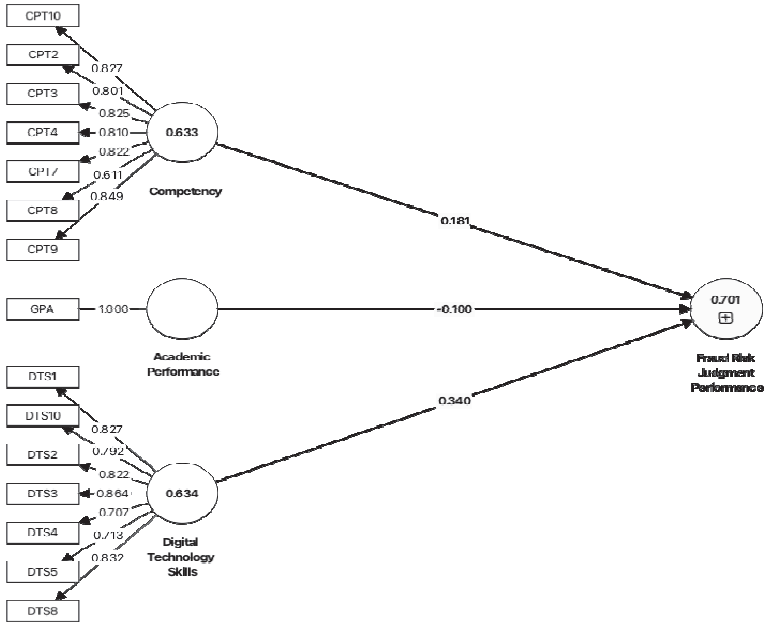


*Figure 2: Measurement Model*

The values of loadings should be ≥0.5, the value of AVE should be ≥ 0.5 and the value of CR should be ≥ 0.7. As shown in Table 5, the values of AVE are all higher than 0.5, while the values of CR are all higher than 0.7. The loadings were also acceptable, with a few loadings less than 0.708, which is also acceptable (Hair et al., 2019). It is concluded that the constructs meet the reliability and convergent validity requirements.

**Table 5:** Convergent Validity

| Variable | Items | Loading | CR | AVE |
|---|---|---|---|---|
| **Competency** | CPT10 | 0.827 | 0.923 | 0.633 |
| | CPT2 | 0.801 | | |
| | CPT3 | 0.825 | | |
| | CPT4 | 0.810 | | |
| | CPT7 | 0.822 | | |

| Variable | Items | Loading | CR | AVE |
|---|---|---|---|---|
| | CPT8 | 0.611 | | |
| | CPT9 | 0.849 | | |
| **Digital Technology Skills** | DTS1 | 0.827 | 0.923 | 0.634 |
| | DTS10 | 0.792 | | |
| | DTS2 | 0.822 | | |
| | DTS3 | 0.864 | | |
| | DTS4 | 0.707 | | |
| | DTS5 | 0.713 | | |
| | DTS8 | 0.832 | | |
| **Fraud Risk Judgment Performance** | RJP_CONS1 | 0.796 | 0.875 | 0.701 |
| | RJP_CONS2 | 0.831 | | |
| | RJP_CONS3 | 0.882 | | |
| **Academic Performance** | GPA | SIM | NA | NA |

In Step 2, this study assessed discriminant validity using HTMT criterion suggested by Henseler et al. (2015), as updated by Franke and Sarstedt (2019). HTMT values should be ≤ 0.85 for the stricter criterion and the moderately lenient criterion should be ≤ 0.90. As shown in Table 6, the values of HTMT were all lower than the stricter criterion of ≤ 0.85 as such, it can be concluded that the respondents understood the distinction between the three given constructs. Taken together, both validity tests showed that the measurement items are both valid and reliable.

**Table 6:** Discriminant Validity

| Variable | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| 1. Academic_Performance | | | | |
| 2. Competency | 0.103 | | | |
| 3. Digital Technology Skills | 0.116 | 0.564 | | |
| 4. Fraud Risk Judgment Performance | 0.078 | 0.383 | 0.481 | |

4.2.2 Structural Model

As suggested by Hair et al. (2019), this study reports the path coefficients, the standard errors, t-values and p-values for the structural model using a 10,000-sample re-sample bootstrapping procedure (Ramayah et al. 2018). Also, based on the criticism of Hahn and Ang (2017) that p-values are not good criteria for testing the significance of the hypothesis, this study uses a combination of criteria such as p-values, confidence intervals and effect sizes. Table 7 shows a summary of the criteria that is used to test the hypotheses developed:

**Table 7:** Hypothesis Testing

| Hypo | Relationship | Beta | Std Dev | t-values | p-values | BCLL | BCIUL | f2 | VIF |
|---|---|---|---|---|---|---|---|---|---|
| H1 | Competency -> Fraud Risk Judgment Performance | 0.181 | 0.108 | 1.675 | 0.047 | 0.005 | 0.353 | 0.03 | 1.353 |
| H2 | Academic Performance -> Fraud Risk Judgment Performance | -0.100 | 0.096 | 1.043 | 0.148 | -0.253 | 0.065 | 0.01 | 1.013 |
| H3 | Digital Technology Skills -> Fraud Risk Judgment Performance | 0.340 | 0.122 | 2.785 | 0.003 | 0.110 | 0.520 | 0.11 | 1.367 |

First, this study tested the effect of Competency on Fraud Risk Judgment Performance, with an $R^2$ of 0.212 which indicates that Digital Technology Skills explain 21.2 percent of the variance in Fraud Risk Judgment Performance. The relationship was significant ($\beta$ = 0.181, $p < 0.05$) which gives support for H1. Next, this study tested the effect of Academic Performance on Fraud Risk Judgement Performance. Academic Performance ($\beta$ = -0.100, $p > 0.05$) was not significantly related to Fraud Risk Judgement Performance, thus H2 were not supported. Finally, this study tested the effect of Digital Technology Skills on Fraud Risk Judgement Performance which reported positive significant relationship ($\beta$ = 0.340, $p < 0.05$), thus H3 was supported. The structural model is depicted in Figure 3.

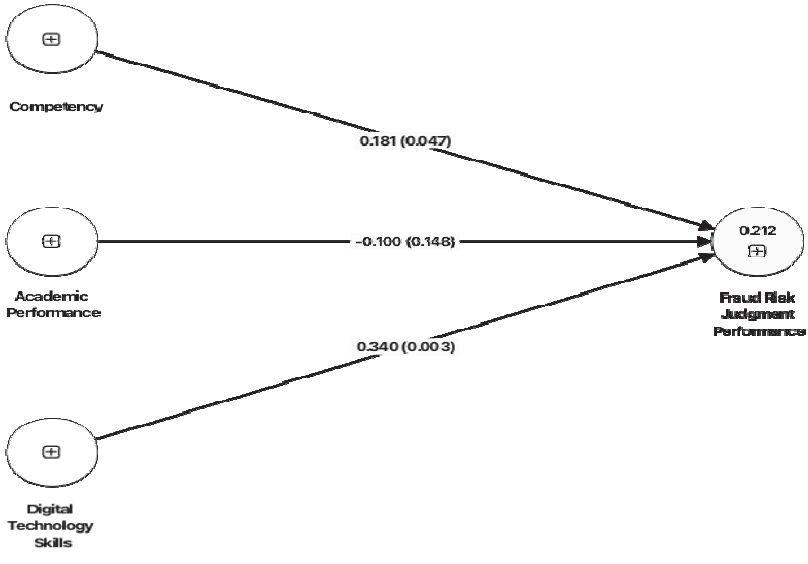


*Figure 3: Structural Model*

## 5. Discussion and Implication

The auditing profession in Malaysia has faced substantial challenges due to a rise in fraud cases and the difficulties auditors encounter in presenting a „true and fair view“ of financial statements. This situation has heightened scrutiny on the effectiveness of the external auditor's role, particularly in assessing fraud risks. It is imperative to investigate the root causes of deficiencies in auditors' fraud risk judgment performance. One area of interest is whether these deficiencies stem from the auditors' educational backgrounds. Consequently, this study examines the factors influencing future auditors' fraud risk judgment performance from one lenses of Social Cognitive Theory, namely the „individual factors”. The findings emphasize a significance of future auditors' competencies and digital technology skills in enhancing fraud risk assessment capabilities. This aligns with the evolving business environment, where transactions predominantly occur on digital platforms, thus necessitating proficiency in digital skills. Practically, higher learning institutions should take the initiative to embed program learning outcomes that focus on equipping students with digital technology skills, thereby improving their employability rates. Future study should incorporate other aspects of Social Cognitive Theory, which is environmental factors that may influence future auditors’ ability to assess fraud risk.

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