

ASSESSMENT 1

LEVEL 5 ASSESSMENT SPECIFICATION

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Module:	Changemakers: Applying a Research Mindset		
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Lecturer:	Emma Roberts	Internal Verifier:	Vic Saunders
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Submission method:	All written assessments, where practical and possible, must be submitted via Turnitin unless otherwise instructed by the Lecturer. (Please DO NOT put this assessment specification into Turnitin or it will match many similarities with other students' submissions.) Alternative submission method (if applicable): Late submission of the assessment will result in a late penalty mark: Work which is submitted up to 1 week late will be capped at 40% for the first attempt and will be awarded a mark of 0% for re-assessment. Late submission penalties may be lifted only if there is an approved extenuating circumstances claim. Work submitted more than 1 week late will be considered as a non-submission and will not be marked. The work may be considered as a submission for reassessment if offered by an Examining Board or if there is an approved extenuating circumstances claim.		
Academic honesty / referencing:	Academic honesty is required. In the main body of your submission you must give credit to authors on whose research and ideas your work is based. Append to your submission a reference list that indicates the books, articles, etc. that you have used, cited or quoted in order to complete this assessment.		

Module Learning Outcomes (from module syllabus)

- Demonstrate knowledge and critical understanding of a research mindset, recognising the values and the contribution that research makes to addressing the problems of the contemporary world.
- Apply a research mindset within a work-based or academic context to develop a novel research proposal.

1. Task 1

Digitalisation of Malaysia's tax administration has introduced new challenges and adjustment needs for businesses. One problem that I noticed was the implementation of e-Invoice in a local hardware SME. I was exposed to the problem due to my association with a hardware company named FS Home Hardware and I heard the challenges faced by the business when enabling e-Invoice.

The financial implications were one of the major issues. The RM16,000 is estimated to be the cost incurred by the business to implement e-Invoice. It's a significant cost for a smaller business to adjust their processes and technology. The business also chose to use the IRS POS System Software, as it was believed that it would be more convenient to connect with the e-Invoice requirements. The inner system and implementation details, however, are confidential and thus I am unable to offer screenshots or detailed technical information.

In addition, the business also experienced difficulties relating to employees' technological knowledge. Staff required training to become familiar with new system. In the business, only a few workers knew the IT more and the employee who knew the IT is also adapting to the new e-Invoice system. This resulted in an additional training and learning need.

I began to wonder if financial cost was the only reason influencing e-Invoice adoption. This experience indicated that technological readiness, skills of employees, training, systems compatibility and complexity of implementation may also be other factors that may influence SMEs' capability to implement e-Invoice. There was also a general question, did smaller businesses have enough resources to handle a new digital need? Hence, I chose to explore the factors beyond e-Invoice adoption in the hardware industry with respect to Malaysian SMEs rather than it being just a compliance matter.

2. Task 2

• AI Generative Prompt

I am investigating the factors that influence e-Invoice adoption among Malaysian SMEs, with a particular focus on the hardware sector. Identify recent academic literature published from 2022 onwards that discusses factors influencing e-Invoice adoption or e-Invoice readiness among SMEs. Prioritise studies conducted in Malaysia, but include relevant international studies where they provide useful theoretical support. Organise the potential factors into

technological, organisational and environmental categories where appropriate. Identify the main findings of each source and explain how they relate to e-Invoice adoption. Please provide genuine academic sources with sufficient publication details or accessible webpage links where available. Please do not fabricate the references.

- **AI Selected Output**

The literature suggests that e-Invoice adoption among SMEs may be influenced by a combination of technological, organisational and environmental factors. Technological factors may include technological readiness, system compatibility, integration with existing software, system complexity and security risks. Organisational factors may include implementation costs, management support, employee skills, training and organisational readiness. Environmental factors may include government regulations, regulatory pressure, stakeholder influence, competitive pressure and support from software providers or other external parties. Other possible factors include perceived benefits, social influence, resistance to change and perceived risk.

The Technology-Organisation-Environment (TOE) framework provides one useful way of organising these factors. Recent research also suggests that the relative importance of individual factors may differ according to the country, industry, organisation and theoretical framework used.

➤ **AI Evaluation**

The AI-generated output was helpful as a starting point as it identified some common themes that could have an impact on the uptake of e-Invoice, including technological readiness, system compatibility, implementation cost, employee skills, training and regulatory pressure. But I was not confident that every factor the AI identified applied equally, and that it was supported by academic research. Thus, the suggested references and findings needed to be verified with the original academic sources.

From the literature review, some factors mentioned by the AI were uniformly supported and others were not. Tiwari (2023), have found that the adoption of e-invoicing can be influenced

by compatibility, complexity, relative advantage, trialability, firm size and competitive and regulatory pressure. In contrast, Ilias (2026), in their study of the UTAUT2 (Unified Theory of Acceptance and Use of Technology 2) model with Malaysian SMEs, determined that social influence had the greatest positive influence while security concerns and perceived risk were negative influences. In that study, the variables of effort expectancy, facilitating conditions and trust were not found to be statistically significant.

The difference shows that no single factor can be assumed to be the determinant for e-Invoice adoption. The results might vary according to the research context and theories. So, I looked at the AI output as an initial guide for literature, not as evidence. I did some independent checking of the sources and looked at what both sources had in common before choosing the factors relevant to my research question.

➤ **The Literature Discussion**

Recent literature indicates that the implementation of e-Invoice is not just about whether an SME can afford new software, but is also a multidimensional issue.

a) Technological factors

Technological readiness seems to be one of the key factors for SMEs. San (2023), conducted a study to determine the readiness of Malaysian SMEs in preparing for the adoption of e-Invoice and found that the readiness of the businesses was not the same. The study revealed that several stages of readiness exist, and raised questions about the reliability, usefulness and risks of e-Invoice technology. This is supported by Ilias (2025), which conducted a study on the early adoption of e-Invoice in Malaysia based on TOE framework. The key technological factors identified by the study were system integration, API (Application Programming Interface) usage and automation. It also identified real-world issues such as system changes, delays in validation, Internet and server limitations also format incompleteness, especially for smaller business that are less digitally prepared. The findings are significant for the hardware industry, as the SMEs might already be using a package of point-of-sale, accounting or inventory systems. Thus, the integration of an existing system with e-Invoice requirements could help in the ease of adoption.

b) Organisational factors

Organisational resources and capabilities may also affect adoption. Roslan (2024), state that the initial costs and technical expertise needed for e-Invoice implementation are significant hurdles for Malaysian SMEs. Likewise, Puspavathi (2025) reported that technology, organizational and environmental aspects are significantly affecting the e-Invoice readiness of the Malaysian SMEs. Organisational factors were identified as management support, employee skills and organisational culture, and training was also identified as important. This offers a valuable link to the practical observation in Task 1. The hardware SME I talked to said that the cost of implementing e-Invoice was around RM16,000 and that staff training was needed. However, the literature indicates that cost cannot be assumed as the sole explanation. The implementation can also be poorly managed if the employees are not capable, management does not support the implementation well or the employees are not prepared and trained for the implementation.

c) Environmental factors

According to Tiwari et al. (2023), competitive pressure and regulatory pressure were other factors for choosing e-invoicing. Not to mention, Puspavathi (2025) also highlighted the environmental factors affecting e-Invoice readiness of Malaysian SMEs namely stakeholder cooperation and compliance with the requirements of the Inland Revenue Board. There is also additional evidence from more recent Malaysian research. Financial problems, regulatory complexity, technological readiness, human resistance and perceived complexity were found to be the problems encountered by SMEs in Northern Malaysia in adopting e-Invoice (Nasir, 2026). The study also recommended training, digital infrastructure and government incentives and regulatory guidance as forms of support.

d) Behavioural and perceived factor

I have to acknowledged not all barriers are purely technological or financial. According to Ilias (2026), one of the positive influencing factors for Malaysian SMEs to adopt e-Invoice is social influence. However, perceived risk and security concerns negatively affected behavioural intention. This is crucial, as it demonstrates the adoption of technology can be dependent on the perception of the technology by the owner and employees of the business, not just on the availability of the technology.

➤ **Problem Definition**

In general, the literature suggests that e-Invoice implementation for Malaysian SMEs is driven by various interrelated technological, organizational, environmental, and behavioural factors. However, the findings are not completely consistent across studies. Various studies highlight various factors depending on the theoretical approach and research context. The practical experience from the hardware SME also indicates that implementation costs include financial investment, training staff and adjusting to a new system. But these observations do not identify what factors are most important in adoption. Also, most of the literature available in Malaysia looks at SMEs in general rather than specifically the hardware industry. Thus, the research problem to be addressed is how the factors affect e-Invoice adoption by Malaysian SMEs in the hardware sector.

3. Task 3

- **AI Generative Prompt**

Based on my literature review on factors influencing e-Invoice adoption among Malaysian SMEs, with particular focus on the hardware sector, suggest three possible research questions for a small exploratory study. The research questions should focus on understanding the factors affecting e-Invoice adoption rather than assuming that cost is the main factor. Compare the strengths and weaknesses of each question in terms of scope, clarity, ability to be answered through primary research and suitability for a small study involving Malaysian hardware SMEs. Recommend the most appropriate research question and explain why.

- **AI Selected Output**

- 1. What factors influence e-Invoice adoption among Malaysian SMEs in the hardware sector?*
- 2. How do technological, organisational and environmental factors affect e-Invoice adoption among Malaysian hardware SMEs?*
- 3. What are the main barriers and enablers affecting e-Invoice adoption among Malaysian hardware SMEs?*

Question 1 is the most appropriate because it provides a broad and exploratory focus without assuming in advance which factors are most important. It allows the researcher to identify factors from the experiences and perspectives of SME participants. Question 2 provides a stronger theoretical structure through the Technology-Organisation-Environment framework, but it may restrict the research by focusing mainly on predetermined categories. Question 3 is also useful but places greater emphasis on barriers and enablers, which may overlook factors that do not fit clearly into either category.

➤ **AI Research Question Evaluation**

AI-generated questions were helpful in further clarifying my research question. I think the most relevant choice was Question 1, since I'm studying factors that affect e-Invoice adoption instead of testing a set of factors, which I think would be more of a research paper. The results of Task 2 have confirmed the results of Task 1, in which literature has been identified for different technological, organizational, environmental and behavioural aspects in various contexts. While the Technology-Organisation-Environment (TOE) framework is explicit in Question 2, including the three categories in the research question itself may result in the study being less exploratory. Likewise, the specific focus on barriers and enablers in Question 3 can result in the failure to include potentially relevant factors. Therefore, I retained Question 1:

“What factors influence e-Invoice adoption among Malaysian SMEs in the hardware sector?”

The wording is broad enough to allow participants to identify factors that may not have been anticipated from the literature. It also gives a clear link between the practical problem from Task 1 and the literature reviewed in Task 2.

• **AI Generative Prompt 2**

For the research question “What factors influence e-Invoice adoption among Malaysian SMEs in the hardware sector?”, suggest an appropriate research approach for a small exploratory study. Compare quantitative surveys, qualitative semi-structured interviews and mixed methods. Consider the research philosophy, data collection method, sampling strategy, realistic access to participants, reliability, validity and the time and resources available for a student research project. Recommend the most feasible approach and explain why.

- **AI Selected Output**

For a small exploratory study, qualitative semi-structured interviews may be the most appropriate approach because the research question asks “what factors” influence adoption and requires an understanding of SME experiences and perceptions. An interpretivist research philosophy would be suitable because the study seeks to understand how participants perceive and experience e-Invoice adoption.

A purposive sampling strategy could be used to select approximately 3–5 Malaysian hardware SMEs, with one relevant participant from each business, such as an owner, manager or employee involved in accounting or e-Invoice implementation. Semi-structured interviews of approximately 20–30 minutes would allow consistent questions to be asked while giving participants the opportunity to explain their experiences. The data could then be analysed thematically to identify common and differing factors across the participating businesses.

Although a quantitative survey could reach more respondents, it would require a larger sample to produce meaningful findings and may provide less detailed insight into why particular factors influence adoption. A mixed-method approach could provide both breadth and depth but would require more time and resources and may therefore be unsuitable for a small student project.

➤ **AI Evaluation and Justification**

I would apply the qualitative exploratory research design with an interpretivist approach. This is suitable because my research question is about understanding the factors that influence the adoption of e-Invoice in the view of SMEs, not to determine the statistical relationship between variables that are already known. A qualitative approach would enable participants to discuss their experiences in more detail. This is especially relevant since the literature reviewed in Task 2 indicates that the role of individual factors is different in different research situations.

First, I will use purposive sampling to select 3-5 Malaysian SMEs in hardware industry. One participant from each business will be chosen based on the engagement in the e-Invoice implementation process, such as an owner, manager or employee who manages the accounting or e-Invoice system. Participants who have firsthand knowledge of the problem should be able

to contribute more information than a random sampling of participants. Semi-structured interviews of about 20–30 minutes would be conducted to collect data. To support this, a guide would be prepared for use in the interviews, including the most frequently asked questions, with additional questions to be asked if relevant points are raised by the participants.

Interviews would cover such topics as implementation costs, technological readiness, compatibility with current systems, employee skills and training, management support, regulatory pressure, perceived benefits, security concerns and external support. Thematic analysis would then be used to analyse the interview data. Responses would be analysed and coded to highlight common themes and variations among the businesses. These themes would then be compared to the factors identified in the literature.

Furthermore, consistency in the use of the interview guide and interview procedure across participants would improve reliability. Interviews would be recorded and transcribed if consented and a systematic coding process would be applied to minimise inconsistencies in the identification of themes.

The validity would be increased if the participants were directly involved in the e-Invoice adoption and the questions asked during the interview would closely match the research question. It would also be useful to compare the responses of several SMEs to find out if specific factors are common across all SMEs or specific to different SMEs. The results would then be compared to the existing literature to determine any similarities or differences.

The study would have some restrictions, though. It is expected that the sample population size of SMEs would be between three to five and is not large enough for the findings to be statistically generalised to all SMEs in Malaysia. Participants can also offer subjective answers and access to businesses can be limited due to the commercially sensitive nature of e-Invoice systems and financial information. However, given the time and budget, a small qualitative research study would offer realistic and detailed insight into the experiences of hardware SMEs.

4. Task 4

The objective of the proposed study is to examine factors that affect e-Invoice adoption among small and medium-sized enterprises (SMEs) in the hardware industry. e-Invoice is an electronic billing system that allows the submission of electronic invoices to the Inland Revenue Board of Malaysia (HASiL) for validation (jomeinvoice.my, 2026). SMEs are defined as small and medium enterprises that are in business within Malaysia, and adoption is the acceptance and use of e-Invoice in their business practices. The hardware industry comprises companies that sell hardware and hardware-based industrial or consumer goods. The research question, “*What factors affect the e-Invoice adoption of Malaysian SMEs in the hardware industry?*” was chosen because it has an exploratory focus that does not assume that one factor is the cause of adoption.

This is important because the literature reviewed in Task 2 showed that there are a number of potential influences, such as technological readiness, system compatibility, implementation costs, employee skills, training, management support, regulatory pressure, social influence and perceived risk. Tiwari (2023) have linked the factors of compatibility, complexity, relative advantage, trialability, firm size, competitive pressure and regulatory pressure with the adoption of e-invoicing. Thus, an exclusive financial analysis may not be sufficient to grasp the question.

The study will be qualitative in nature with exploratory research design and will be grounded on an interpretivist philosophy. Interpretivist approach is appropriate as research aims to generate meaning from the experiences and perceptions of those engaged in the process of e-Invoice adoption and not to statistically test prespecified relationships between variables (Williams, 2025). A qualitative approach would also give the participants the freedom to report on any unexpected problems or benefits that were not detected in the review of the literature. Purposive sampling would be used in the selection of participants (Williams, 2024). The proposed sample would include about three to five SMEs in the hardware sector from Malaysia, with one participant from each business. The participants may be appropriate business owners and managers, accounting staff or persons directly involved in implementing or operating the e-Invoice system. Interviewing those who have direct experience would make the information obtained more relevant. Data would be gathered using semi-structured interviews for about 20-30 minutes. The interview questions would delve into the experiences of participants in implementing e-Invoice, the implementation cost, technological preparedness, compatibility

with the present system, employee skills and training, management support, regulatory requirements, perceived benefits, security concerns, and software provider support. The semi-structured format would ensure that similar areas are discussed across participants and would also enable participants to explain experiences that may differ between businesses.

Thematic analysis would be used to analyse the interview data. Responses to interviews would be analyzed and coded for the purpose of finding commonality and patterns (Schildt, 2026). These themes would then be compared between the participating SMEs and taken into account in comparison with the results of the literature review. This would enable to check if the factors found in the past studies are the same that are being experienced by the hardware sector SMEs or sector specific factors appear. Good reliability would be achieved by using the same interview guide and a consistent method of conducting and recording interviews. If participants give consent, interviews would be recorded and transcribed to minimize the loss of important information. Themes would be consistently identified through a systematic coding process. Validity could be enhanced by choosing participants who have first-hand experience in the implementation of e-Invoice and structuring the interview questions in a clear way that is relevant to the research question.

Looking at the answers of multiple SMEs might be able to give indications of common experiences and variations between businesses. Existing academic literature would also be compared to the findings with the aim of determining if the primary research confirms or contradicts the previous findings. The participant access would be gained via existing contacts and through professional or business networks. Data collection would be obtained with permission from each participating business. Participants would not be obligated to share confidential business information due to the fact that e-Invoice implementation could involve commercially sensitive financial and technological information. Their names and business names would also be anonymised on the research report if requested. The participation would be voluntary and informed consent would be obtained prior to interviews.

The major weakness of the proposed research is the use of a small number of subjects. These three to five SMEs would give the researcher detailed qualitative information and would not allow the findings to be statistically generalised to all SMEs in Malaysia. Nevertheless, the approach is realistic for a small student research project and could provide a deeper understanding of how technological, organisational, environmental and behavioural factors are experienced specifically within the Malaysian hardware sector.

5. Task 5

<https://canva.link/6hsznuo2sn88f03>

6. Task 6 – Gibbs Reflective Cycle

a) Description

I was drawn into the topic of e-Invoice adoption due to its significant connection with the accounting field and the evolving nature of accounting within business operations. My interest in the issue began when I heard about the implementation of e-invoice in the internet. I also had an opportunity to be personally involved in the issue since I knew someone whose father runs a hardware shop and had to go through the e-Invoice implementation process. This allowed me to gain an insight into the fact that the introduction of e-Invoice is not just a compliance or accounting concern, but it can also be a practical hurdle for businesses.

With the Changemakers module I had the opportunity to investigate more deeply than just using my first understanding of the issue. I conducted a literature review and sourced papers to see what factors might be involved and what research questions I could pursue, assessed the literature I found, and finally formulated a research proposal with the hardware sector in Malaysia.

b) Feelings

I was first interested in the topic because it was related to my studies and that I had experienced a real business situation with e-Invoice. As I continued with tasks though, I got to thinking about the things happening behind the issue. The first thought I had was that e-Invoice would be a financial or technological strain, but I found that was not the case. Some of these tasks were difficult, especially focusing from a broad topic to a specific research question and using the correct academic resources to back up my arguments.

I also discovered that when it came to generative AI, you have to be careful as information it generated may not necessarily be reliable. Even with these difficulties, I was more and more satisfied with the progress of my first idea into a formal research project.

c) Evaluation

A positive thing about doing this was that it helped me explore a real-world problem I had an interest in. I had the opportunity to look at e-Invoice as more than just an accounting requirement, but how technological, organisational, environmental and behavioural aspects can affect its adoption among SMEs.

The literature search was particularly useful since it was extended my knowledge on the topic. I found that cost of implementation was just one factor and that other factors like technological readiness, employee skills, training, regulatory pressure and the perceived risk could affect adoption. The generative AI was also found to be helpful for brainstorming and finding terminology, but it was crucial to verify the content against original academic sources.

d) Analysis

The most significant lesson to be learned from this experience is that a real-world observation does not automatically turn into a research problem. Initially, I was just aware that the implementation of e-Invoice would be difficult for a hardware SME. As I continued my research, I realised that I had to dig deeper and ask myself what makes adoption difficult. Are the challenges only related to cost? Do different SMEs experience the same problems? These questions helped me to shift from making observations to forming a question that I could actually research.

I also developed a better understanding of the importance of having a research mindset. Before I would take my first guess, I needed to look for evidence, compare the different findings and try to think about alternate explanations. It was also a learning experience for me that generative AI can be a valuable research tool, but should not be used in place of critical thinking and independent verification.

e) Conclusion

Overall, I'm thankful to have been given the opportunity to see an issue through the lens of Changemakers when before that, I might have only been seeing it from an accounting point of view. The idea of reading about e-Invoice online and hearing about a real business experience

turned into a detailed exploration into the challenges and opportunities faced by SMEs in the hardware industry.

The work was difficult in some places and involved a rethinking of my assumptions, but I feel good about the results and the research proposal I am developing. What is more important to me is that I have come to understand that research can start with something that I observe in my everyday life and slowly evolve, through systematic investigation, into a valuable research question.

f) Action Plan

I hope in the future to apply the research approach gained from this module to other problems in accounting and business. I think this will be crucial in my future career because in the future accounting is becoming more and more intertwined with technology and digital systems, and it is crucial to know the practical problems that businesses encounter. I also intend to enhance my searching and assessing skills for academic sources, especially when employing AI tools in the research process. I would like to be more sceptical of information than to take the first explanation I hear. In the real-world scenario, I would also begin planning for the access to the participants and the need for confidentiality sooner to make the data collection process more effective.

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