

Uncertain Supply Chain Management

homepage: www.GrowingScience.com/uscm

The moderation of trust on the relationship between TOE factors and generalized audit software usage and financial performance

Ahmad Marei^{a*}

Financial and Accounting Sciences Department, Faculty of Business, Middle East University, Amman, Jordan

ABSTRACT

Article history:

Received January 20, 2024

Received in revised format

January 27, 2024

Accepted March 19, 2024

Available online

March 19, 2024

Keywords:

Generalized Audit Software

TOE

RBV

Trust

The importance of Generalized Audit Software (GAS) is particularly important for nations' development. Picking 'Over Conduct Theorized Results and Consequences' Poly GAS as a test subject, results have been inconsistent in previous studies on predictor variables and consequences of using GAS. This study aims to investigate the predictors and consequences of using GAS. From the perspective of Resource-oriented technology (Approach (TOE) fitness - View (RBV Environment), It is intended that technology's relative advantage, compatibility, and complexity, as well as organizational readiness top management support IS committee) Villa have an important influence on GAS, which in turn is expected to affect financial performance. Trust will serve as a moderating variable between technological and organizational factors, and GAS. Profession MB. This counts all audit firms in Jordan. The research questionnaire was distributed by purposive sampling for subsequent investigation. As many as 210 valid questionnaires out of all completed questionnaires were gathered from this study by using Smart PLS as the data analysis software. Technological relative advantage, compatibility, and complexity as well as organizational readiness (top management and organizational readiness) have a significant effect on GAS which in turn affects financial performance. Accepted Southern Trustor did not affect the impact of technology and organization factors in GAS. So, the results can provide some ideas to policymakers in Jordan about how to foster the use of GAS to improve financial performance and bring down the new technology adoption costs.

© 2024 by the authors; licensee Growing Science, Canada.

1. Introduction

In the last few decades, the business success model has changed: through quantifying operations using information technology (IT) we can achieve more for less now! Meanwhile, if you know exactly how to manage your business then even better or even how best to operate IT that they buy at the best stage (Burnett & Lisk, 2021). As they gradually put IT into their production process, most private enterprises, and public institutions naturally all choose to invest in IT faculties that promise this kind of contribution (Alshirah et al., 2021; Kabeyi, 2019). GAS is an auditing software created especially for auditors to automate various audit tasks. The GAS software might be bought from a supplier as an adjunct for specific purposes such as audit client risk assessment and sampling, or it could be built by the firm itself in line with its practices for conducting in-house audits. In the developed world audit technology is a wave. As can be seen, the way these tools will be adopted in developing countries may be very different. This is extremely significant, especially since the auditing and accounting of accounts of foreign investment have been much criticized for bad or even opaque results. As business operations are increasingly complex and dependent on IT, the need for auditors who can understand and use technology is growing. That demand cannot be satisfied merely by hiring people with an IT background today is not enough, nor will it be tomorrow: as business operations become increasingly complex and dependent on IT, so does the need for technology-fluent auditors (Lutfi et al., 2022A). The use of technology in these tests through the Generalized Audit Software (GAS), in addition, PCAOB

* Corresponding author

E-mail address ahmadmarei27@gmail.com (A. Marei)

forecasts that its application will expand even more (Lutfi et al., 2022B). From this perspective it's important to study further how GAS performs and the difficulties of integrating its features with other IT capabilities (Backof et al., 2022)

GAS is varied. Gas falls into two main categories: software coded by companies for their purposes, and general products for humankind. General-purpose GAS consists of such perennially popular products as Audit Command Language (ACL) Interactive Data Extraction and Analysis (IDEA) Top CAATs Active Data for Excel Panaudit Plus CA: Easytrieve Statistical Analysis System (SAS) Statistical Package for Social Sciences (SPSS). (Alshirah et al., 2022).

Many researchers have in the past written on various GAS utilizations. GAS use varies according to the level of its usage. For example, in the data extraction phase of an auditing activity, GAS can be used for querying and sampling (Lutfi et al., 2022C). In addition, auditors routinely use GAS in the front and back stages of their work or for specific purposes such as data mining (Chu & Yong, 2021).

Jordan is ranked 60th in terms of ICT use. This is a country located in the heart of Southwest Asia. However, the development of GAS applications in Jordan is slow and still in its nascent stage compared to both developed and developing nations (Sandri et al., 2020). The use of GAS is indispensable for domestic enterprises. Following the theory of Resource-based reviews (RBV), the discovery that IT applications like the Gassis system greatly increase the values of companies and then are reflected positively in their financial performance is not accounted for (Qin & Chen, 2022). The use of GAS in private companies in Jordan has only recently begun to attract academic attention.

In addition, the counseling system is developed and verified in advanced industrialized nations. This kind of theory could not be directly applied to a culture like that of developing countries. Patton & McMahon (2021) note that existing theories need to be modified accordingly if they are to suit the needs of underdeveloped or developing societies. This is because issues that installments to develop you have not even existed do have importance for CG INDUSTRY. Thus, it is meaningless to generalize from a developed-country perspective that this kind of issue is not significant on the part of developing countries (Eltweri et al., 2021). Summary or final point: Therefore, whether existing theories are fitting for use in developing countries is a serious question (Chege & Wang, 2010). There have been mixed results in past studies about predictors and consequences of GAS usage (Bradford et al., 2020; Mujalli & Almgrashi, 2020; Shaheen et al., 2023). The Diffusion of Innovation (DOI) Theory and Technological-Organizational-Environmental (TOE) frame Of Mind have been suggested as a good theoretical base for studying B2B IT in developing countries (Shahadat et al., 2013).

In terms of the usage and outcome of GAS, researchers have indicated mixed findings (Lee & Tajudeen, 2020). Finally, the present study aims to further widen this literature by addressing the role of Trust as a moderator in TOE-related GAS usage among large entities operating in Jordan. Furthermore, one of the aims of the present study is to try to broaden our knowledge of these aspects by using congeneric data: What role does a person play for an organization and society? What kinds of agencies have been created to propagate funds aimed at encouraging others (others who are just as well suited as they would have been had a college been opened; nevertheless, are going to work laboring under more difficult economic circumstances)?

2. Literature Review and Hypotheses Development

2.1 GAS usage

The process of using IT innovation has been addressed by various researchers in many stages. The stage is decided by the enablers and the barriers. In terms of the enablers, there is no agreement among researchers. Factors like infrastructure, technology, organizational and management characteristics as well as limitations on resources have all prevented GAS from being widely accepted as an auditing tool (Clohessy & Acton 2019). Most authors call GAS Computer-Aided Tools for Tests or CAATs after it was first applied in auditing in the mid-1960s. GAS is a group of CAATs that assists auditors in performing audits; it allows auditors to log in to computerized accounting systems. When using this software, auditors can handle audit tasks including querying, manipulating, data extraction, summarizing, and analysis (Salijeni et al. 2021). GAS can analyze different databases and formats of computer data according to Liu et al. (2018). As auditors can ask computers to perform many new types of query work, GAS speeds up the completion of an audit task significantly. Furthermore, GAS can also complete mathematical calculations and grouping; statistical analyses; sequence checks; duplication checks; or even make all the data more accurate by changing it back to a record with error.

Several studies with the theme of IT adoption and its consequences at last were published. Most of these didn't echo the theoretical antecedents of RBV theory. They mainly discussed the effect of using IT on Performance to Finance. This logic follows in sharp contrast with a general proposition usually agreed: upon (Alkhazaleh & Marei, 2021). The financial performance of GAS gives a good result with zero-to-low costs. GAS usage does help increase financial performance in some respects and from the perspective of communication. (Kokko, 2023) There is a supportive result from research on IS usage and audit firm performance (Li et al., 2018). Many studies have found a significant correlation between acceptance of the technology on a given site and such factors as cost, complexity, and compatibility. Other factors that influence adoption

include top management support and readiness for IC committees (Baysinger & Butler 2019). In addition, this paper tries to find out what factors encourage or persuade companies in Jordan to undergo scale adoption ultimately.

2.2 Theoretical Framework

This paper tests the predictors and effects of GAS use. From various theories, we can use them to make predictions about the predictors. However, the TOE at the organizational level (technology-organization-environment) is particularly suitable for explaining why the adoption of these factors themselves on an organizational basis: Most studies that have employed the TOE also raise factors essential to organizational adoption in terms of such as suggested by diffusion of innovation (DOI) in its treatment of the confluent variables relative advantage, compatibility, trialability, and complexity. According to findings from prior studies, it is these three factors that most greatly influence technological innovation evaluation. Following technological innovation, the findings suggest that organizations with firmly established management structures as well as organizational characteristics are generally more inclined to adopt information systems (IS). Both the TOE and the DOI are employed in this study to account for technological and organizational innovation as well as reasons, environmental factors like trust do not have even a model yet but for that reason alone exists in operational form with a testable prediction. Of the different theories that exist for saying what could be the consequences of adopting GAS, the RBV assumes past obtained results to be brought to reality and into present-day life. It is an assumption on the part of researchers familiar with technology companies that provisioning resources and capabilities inside enterprises can create further benefits. (Alharasis et al., 2023; Zaini et al., 2018). The RBV provides a theory of technology as an end to how IT systems such as GAS usage will produce perceived changes. (Marei et al., 2021) The RBV maintains that businesses make different values and effects by collocating a variety of economically inimitable or valuable assets across firms' resources. (Miller, 2019) The more they utilize, the more chance they must create something new, netting greater benefits once it is adopted. (Wadho & Chaudhry, 2018) Several studies have used RBV to explain the effect of ITC on the FP (Wijayanto et al., 2019). This study combines the TOE and RBV theory to explain how GAS affects Financial Performance.

2.4 Hypotheses Development and Framework

Based on TOE and RBV, we hold that there is a positive impact of technological factors and corporate factors on the use of GAS. We predict that the effect of GAS on Financial performance is also good. If, trust will moderate individual and technological factors' collective effect on GAS usage.

2.4.1 Technological Factors

TOE is the first article that has been translated into English. It argues that all critical technology involves the incorporation of new technology. Consistent with TOE, earlier studies found a positive relationship between TF and adoption (Sayginer & Ercan 2020). So, this paper suggests:

H₁: *Technological factors have a positive significant relationship with GAS.*

2.4.1.1 Relative Advantage

The benefits of using a GAS can be measured in terms of relative advantage (Zhang et al., 2020A); This resource may not be in English and might require reference to Nordic languages). Experience of Deploying the Technology Only when the enterprises feel that the adoption of GAS is worthwhile can they attempt to implement this innovation. The perceived advantages of a particular technology can be measured in economic or social terms, e.g. performance, happiness, good name (reputation), and convenience (Zhang et al., 2020B). Other advantages of technology over alternative techniques are essential to its adoption by an organization. 'Perceived Greater Benefit' refers to the extent to which a technological factor is considered by companies as offering a greater benefit (Alsheibani et al., 2018). However, there are debates about the impact of relative advantage on innovation usage. Some studies suggest that it has no relationship at all (Johnson et al., 2019; Min et al., 2021). In this research, a positive link is assumed between the RA of using the gas and whether people use it at all.

H₂: *Relative advantages have a positive significant relationship with GAS.*

2.4.1.2 Compatibility

With the company's current system of things, GAS compatibility refers to its stability. It is certainly no longer debatable that compatibility is one of the most critical prerequisites for successful IT innovation. Many studies have found a strong and significant relationship between compatibility, or interoperability issues, and usage decisions of information technology innovation. The system's compatibility for implementation is to be regarded as a requirement in an organization. In doing GAS, we need to also grasp the compatibility of its technology with current technical architecture within an enterprise. Additionally, its integration (i.e., how easy it is to import or export an application) and personalization (i.e., modifying services). The results of studies on compatibility are widely divergent. Compatibility positively affected the use of GAS. In this paper, the hypothesis is proposed that compatibility has a significantly positive pathway to GAS' industry-wide uptake.

H₃: *Compatibility has a positive significant relationship with GAS.*

2.4.1.3 Complexity

According to Rogers and Fisk (2010), the difference between simple and complex technologies is how hard it is for people to learn how to use new technology. Users won't use complex tech Technology (Dewar & Hage, 2018). Studies have found that there is a negative correlation between complexity and the use of new technology. (Saad et al., 2022) state that complexity hurts tech adoption. Complexity in this study is expected to hurt GAS.

H₄: *Complexity has a negatively significant relationship with GAS.*

2.4.2 Organizational Factors

Corporate culture is not only the nation's soul, but also the soul of an enterprise. Subcultures naturally spring up: what we need to be aware of in this connection is that they are equipped with different expectations, values, and norms which instead would undermine communication (deep tch from Beijing newspapers, March 1985). Understanding culture means understanding why people do the things they do and why they live the way they do (Alshirah et al., 2021) part of it, proposes six factors that impact user acceptance of technology. Different parts of technology have varying degrees of freedom for users. The main issues that come about when technology gets locked into a proprietary mold are flagged in two concluding chapters. An industry-wide focus by East Indian management students could provide a much-needed boost to computer literacy. Of course, the same goes for business and any other sector in which such an opportunity arises.

H₅: *Organizational factors have a positive significant relationship with GAS.*

2.4.2.1 Top Management Support

For successful deployment of technology, management support is vital (Marei et al., 2023). Projects should win funding from their superiors for this kind of assistance as well as gain their firm commitment (Khasanah et al., 2021). Consequently, it's those executives at the very top of the company who have a direct hand in creating the company's values through both insights and leadership behavior that bring about a positive spirit. Managing the organization more comprehensively, focusing on the long term, attaining higher ethical standards and a clearer sense of direction, allocating resources strategically, and making the best possible situation for everybody: all this contributes to a mutually advantageous social culture. And it results in more perceived self-efficacy at whatever level. Better management support of GAS was a result of increased resources by management in GAS adoption (Alkhodary et al., 2023). This study will examine the impact on GAS of top management support.

H_{6a}: *Top management support has a positive significant relationship with GAS.*

2.4.2.2 Organizational Readiness

Organizational readiness, this website was required to produce more complex articles than before (Pumplun et al., 2019). A possible indicator that an organization has high technical readiness is a knowledge of its present IT infrastructure and likely limitations, it is also willing to take the step, in terms of providing training to enable the cognitive ability required for GAS\$ computing. (Mujalli & Almgrashi, 2020). A prior study showed that organizational readiness constituted a critical prerequisite for the GAS. For instance, in earlier research. This essay, therefore, proposes that organizational readiness has a positive and significant impact on gas.

H_{6b}: *Organizational readiness has a positive significant relationship with GAS.*

2.4.2.3 IS Committee

According to Kerzner (2019), the IS committee consists of IT professionals in companies. Know the IT industry inside and out and understand its mission as well as vision. familiar with this strategic plan. The IS committee is of paramount importance for those enterprises which intend to use GAS (Serpeninova, et al., 2020). Mansour et al. (2023A) find no significant correlation between an IS committee and the use of GAS by Malaysian suppliers. In this study, we posit that there is a positive relationship between IS committees and GAS dependency in Jordan.

H_{6c}: *IS committee has a positive significant relationship with GAS.*

2.4.3 GAS and Financial Performance

Any IS project aims to enhance communication within the company. A better process means more effective communication for Wamba-Taguimdjee (2020). Organizations today are using information technology (IT) to enhance the flow,

interconnection, and operational arrangement of information. It is also being employed by corporations in strengthening their connections with business partners--whether contract or purchase (Rejeb et al., 2021). In several previous studies, a positive relationship was found between IT usage and actual financial performance (Mansour et al., 2023B; Marei et al., 2024). Now, as well as for the previous results. The study on the advantages of using GAS (IS) is generally quoted (or frequently cited): cost reduction effectiveness in management improvement, enhanced coordination, and internal efficiency (Lamboglia et al., 2021). Thus, based on RBV theory, we propose that GAS usage will have a bearing on corporate efficiency. This leads to the following hypothesis:

H7: *GAS usage has a positive significant relationship with financial performance.*

2.4.4 Trust

Especially in this post-global world, businesses need to be more alert and responsive to what their rivals may be doing because of those sorts of conditions (Ernst & Haar, 2019). Given the rigorous business environment of today, the required number of products or services is forecast based on competitive force (Sharabati, 2023). Without knowing how exactly these advancements will be used, a business may acquire the latest technological telephones modeled by Lee et al., (2019). Trust as a moderating variable is barely studied at all. In the field of marketing, for example, social media adoption among businesses was significantly influenced by Trust in their industry (Alghadi et al., 2024). Business trusts demonstrated the moderating effect of vertical management support combined with inside money during consumable marketing (Mansour et al. 2024). Continuity; Complementarity; Competition inside-aligned noncompetition and Endurance benefits all are contradictions within which goals? These issues will be explored here in this study, ways of building trust between firms, and Trust as a contributor pushing or otherwise inhibiting the development of general-purpose usage fuel cells.

H8: *Trust has a moderating effect on the relationship between technological factors and GAS usage.*

H9: *Trust has a moderating effect on the relationship between organizational factors and GAS usage.*

2. Research Methodology

This is a quantitative study to accomplish the purpose of this study, a survey design will be used. The population in this study is the auditors in audit firms, while the sample is employees who work for those companies. The instrument of this study is a questionnaire that Normahazan et al. (2020) used before. The Delphi method is used within an organization to move away from a more high-level gas (Normahazan et al., 2020). The second measure included financial performance measures that were taken by Cho (2019). Factors such as relative advantage, compatibility, and complexity were derived from Rogers (2003). TMS is a result of Sulaiman and Magaireah (2014). The IS organization committee is something that Ibrahim (2012) discovered. Organizational readiness was derived from Weiner (2019). Trust comes from Dohle et al. (2020). Three expert bilinguals in Arabic and English translated the first "measuremongue"; expectedly, these same authorities also performed a check. With a reliability test from a pilot, we find that all the measures meet requirements since Cronbach's Alpha exceeds 0.70. The online questionnaire was conducted by car drivers themselves. Attendants at Jordanian companies served as representatives and intermediaries for corresponding directly with these people. 495 questionnaires in total were mailed out then individual reminders at intervals also had a further effect on this number. After a month elapsed, 228 replies had arrived. Missing values, outliers, normality, and multicollinearity were checked. Six questions could not be answered and were discarded from the sample. The research officer deleted 12 outliers. The data itself is normal. As we can see from Table 1, compensation for Skewness and Kurtosis do not exceed one (1) by either measure; or it is also apparent that the variation inflation factor (VIF) is less than five (5), tolerance more than 0.20 on average. Therefore, 210 questionnaires were used in the response. This means that the proportion of valid cases to valid responses is 42.4%.

Table 1
Multicollinearity Analysis and Normality

| Variable | No. Items | Skewness | Kurtosis | Tolerance | VIF |
|--------------------------|-----------|----------|----------|-----------|-------|
| Relative advantage | 5 | -.201 | .108 | .516 | 1.932 |
| Compatibility | 4 | .076 | -.215 | .450 | 2.978 |
| Complexity | 4 | -.331 | -.149 | .751 | 1.331 |
| Organizational readiness | 4 | .113 | -.405 | .310 | 2.222 |
| IS Committee | 3 | -.228 | -.930 | .505 | 1.974 |
| Trust | 4 | .188 | -.023 | .387 | 2.569 |
| Top management support | 5 | -.696 | -.626 | .477 | 2.592 |
| GAS | 5 | -.144 | .332 | .832 | 1.197 |
| Financial performance | 5 | .212 | -.218 | | |

3. Findings

4.1 Descriptive Information of Organizations and Respondents

Some Information of Organization and Respondent In this study, a total of 210 auditors were interviewed. 84.1% of the sample was male, 61.4% were aged 41-60 years, and 129 persons were in seventeen years of age bracket (from 41-57). More than half were bachelor's degree holders (57.2 percent), 71.5 percent of whom had 11-15 years of service time.

4.2 Measurement Model (MM)

Factor loadings (FL), reliability (Cronbach's Alpha (CA), and composite reliability (CR)) are presented in the measurement model evaluation form for all of them should be above 0.70 (Hair et al., 2020). As a result, the CA has been diminished by eliminating those production numbers missing both factors. The CA and CR have met the requirement of being greater than 0.70. Convergent validity is shown in Table 2 because the average variance extracted (IVE) was greater than 0.50. Discriminant validity can only be claimed when the square roots of discriminant validity are larger than the correlation between each pair of factors. In Table 2 Measurement Model, all square roots are larger than cross-loadings.

Table 2
Measurement Model

| Variables | CA | CR | AVE | RA | CO | COX | OR | IS | T | TMS | EP | FP |
|-----------|-------|-------|-------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| RA | 0.951 | 0.961 | 0.789 | 0.87 | | | | | | | | |
| CO | 0.929 | 0.929 | 0.750 | 0.72 | 0.93 | | | | | | | |
| COX | 0.970 | 0.981 | 0.889 | -0.34 | -0.32 | 0.93 | | | | | | |
| OR | 0.954 | 0.971 | 0.879 | 0.811 | 0.72 | -0.34 | 0.85 | | | | | |
| IS C | 0.939 | 0.959 | 0.891 | 0.63 | 0.67 | -0.35 | 0.64 | 0.96 | | | | |
| T | 0.941 | 0.960 | 0.887 | 0.65 | 0.61 | -0.21 | 0.66 | 0.46 | 0.94 | | | |
| TMS | 0.967 | 0.973 | 0.849 | 0.72 | 0.62 | -0.28 | 0.71 | 0.60 | 0.61 | 0.95 | | |
| GAS | 0.967 | 0.996 | 0.711 | 0.49 | 0.50 | -0.33 | 0.60 | 0.51 | 0.38 | 0.51 | 0.90 | |
| FP | 0.922 | 0.949 | 0.868 | -0.07 | -0.14 | 0.08 | -0.08 | -0.22 | -0.08 | -0.16 | -0.15 | 0.91 |

3.3 Structural Model (SM)

The explanatory power (R-square) of the structural model is assessed in this way. According to the analysis, the R-square of GAS is 0.68. This means that 68% of the GAS can be accounted for by the variables impacting it and these in turn influence financial performance by 66%. In respect of predictive relevance, Q-Square is greater than zero with 0.41. This implies that the independent variables can predict dependent variables. Except for the Effect size of the IS committee and the Trust Moderation coefficient, all effect sizes are greater than 0.02. These paths are unsatisfactory. This may be a result of the thesis path hypothesis not holding up. In this study, all the hypotheses on path effects were tested, including those for moderation. Table 3 shows the Path Coefficient of the Direct Effect Model. The specifics of each hypothesis (H) result are explained in upcoming sections.

Table 3
Path Coefficient of Direct Effect Model

| H | Relationship | Standard Beta | Standard Error | T-V | P-V | Result |
|-----------------|--------------|---------------|----------------|--------|-------|-----------|
| H1 | TF→GAS | 0.589 | 0.079 | 7.711 | 0.001 | Supported |
| H2 | RA → GAS | 0.113 | 0.049 | 2.434 | 0.009 | Supported |
| H ^γ | CO → GAS | 0.209 | 0.049 | 3.949 | 0.001 | Supported |
| H ^ε | COX → GAS | -0.196 | 0.036 | 3.739 | 0.000 | Supported |
| H ^ρ | OF→GAS | 0.330 | 0.078 | 4.233 | 0.000 | Supported |
| H ^{λa} | TMS →GAS | 0.141 | 0.069 | 2.116 | 0.036 | Supported |
| H ^{λb} | OR → GAS | 0.142 | 0.057 | 2.500 | 0.007 | Supported |
| H ^{λc} | IS C → GAS | 0.069 | 0.060 | 1.112 | 0.259 | Rejected |
| H ^ν | GAS → FP | 0.778 | 0.030 | 24.691 | 0.002 | Supported |

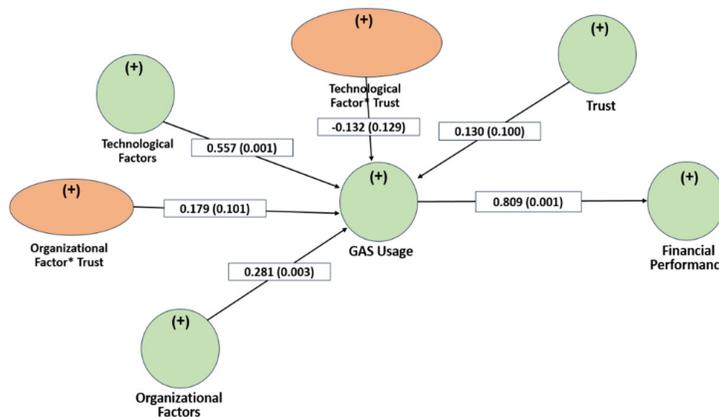


Fig. 1. Moderating Effect of Trust

According to the first hypothesis, technical elements and their dimensions have a major influence on the performance of firms. The hypothesis was confirmed to be accurate. Table 3 presents a comprehensive list of technical characteristics together with their corresponding relative advantages and complexity, compatibility, and other criteria. Thus, the second key hypothesis (H1, H2, H3, and H4) suggests that organizational characteristics and their dimensions have a considerable influence on business performance. Table 3 data demonstrates that organizational preparedness and top management support H6a, while this was not the case for the IS committee. Thus, H6c was rejected, but H5, H6a, and H6b were accepted. The hypothesis for H7 is that there is a connection between GAS and financial performance.

4. Discussion

The purpose of this study is to identify the forces behind the use of GAS as well as its consequences. The results showed that relative advantage and compatibility worked in favor of GAS usage, while complexity worked against it. The results of this study support findings in the published literature on IT adoption and use (Marei, 2023; Siewt et al., 2020). This result supports Roger's (2003) argument that a characteristic of innovation can be an external decision. Organizational context in the TOE framework and the factors derived from the organizational context were integrated as well. Organizational readiness is the most important factor describing the meta-environment for his or her Information System, The heading organization committee was found to be insignificant in the Jordanian context. The present evidence, in terms of the impact of the IS committee, is in agreement with Marei (2022), who found no significant relationship between the IS committee and GAS usage.

The study found that trust does have a moderating role in the effect of openness on verbal persuasion. However, these findings do not replicate other studies. The authors suggest that GAS is still relatively new in Jordan, and competition has so far not risen. GAS had a positive impact on financial performance. This result is in line with earlier studies such as Bradford et al 2020. It is also consistent with the Resource-Based View (RBV) theory which holds that using technologies will earn an even better competitive advantage and hence more success in business. (Nguyen et al., 2021)

5. Implications

In several aspects, this study has advanced the knowledge of gas. Testing the TOE framework and utilizing competitive advantage as a moderating variable has provided support for the TOE. This study also fills the gap as to why previous studies are contrary to each other. Gas usage as an auditing method: three factors broke even and three became different. RBV was also validated in this study along with ToE. Both theories apply to the context of gas in audit firms and can explain significant part variations in both GAS Usage and Financial Performance. This study contributes to the government's agenda of promoting the use of ICT and the increase in employment opportunities in this sector. Based on findings from empirical research, top management should assess their organization's readiness for using GAS in audit firms. They must not forget, however, that many types of resource inertia are obstacles to the successful use of GAS in audit firms. This study serves as a useful reference for Jordanian accounting firms in highlighting the significant effect of technological innovations on Financial Performance. GAS usage is an important decision in the hands of top managers, and this does not merely affect the management people's opinion about their wage bonus but also has significant implications for firm financial performance. Therefore, when management is made up of IS auditors need good models or at least common sense to guide their decision-making in such an important area. Also, policymakers in Jordan who are concerned with improving organizational performance via GAS usage in an audit firm might find it useful to study this as the paper addresses GAS's impact on financial performance and those factors that will facilitate its use. The research findings of this research study have different implications for different Industries. In the field of auditing, an increasing number of auditors who use GAS may represent a chance to develop such instruments or procedures and applications related to GAS that benefit the firm's performance and get even better both now and in the future.

6. Conclusion

Based on auditing practices at several companies' custodians Jing tested a significant influence on GAS use through technological and organizational elements Technological or organizational factors also have the same impact on GAS, and then also affect (rebirth the phrase) Financial performance Some limitations can be used for future work. Data were collected via purposive sampling Thus, the findings of this study can be applied to all audit firms that participated in the study This study has only probed one relationship aspect of TOE factors and GAS usage Future research can carry on examining other variables such as dependency, power, strategic sourcing and more Besides, this study has only explored a small number of TOE factors in audit firms' use of GAS Moreover, this study has only explored the role of GAS in Financial performance through cost reduction, internal efficiency, managerial efficacy in audits and significance Next research can explore the influence of GAS usage on financial performance.

Acknowledgments

Thanks to the Middle East University for their financial support for this article

References

- Alghadi, M., Alqudah, H., Lutfi, A., Ananzeh, H., Marei, A., Almaiah, M., & Al-Matari, Y. (2024). Enhancing cyber governance in Islamic banks: The influence of artificial intelligence and the moderating effect of Covid-19 pandemic. *International Journal of Data and Network Science*, 8(1), 307-318.
- Alharasis, E. E., Tarawneh, A. S., Shehadeh, M., Haddad, H., Marei, A., & Hasan, E. F. (2022). Reimbursement costs of auditing financial assets are measured by the fair value model in Jordanian financial firms' annual reports. *Sustainability*, 14(17), 10620.
- Alkhazaleh, A. M. K., & Marei, A. (2021). Would irregular auditing implement impact the quality of financial reports: A case study in Jordan practice. *Journal of Management Information and Decision Sciences*, 24(6), 1-14.
- Alkhodary, D. A., Salhab, H., Alzoubi, M., Marei, A., & Ali, H. (2023). The Impact of Employee Empowerment on Workplace Creativity in Interior Design Companies in Jordan. DOI: 10.37394/23207.2023.20.150.
- Alsheibani, S., Cheung, Y., & Messom, C. (2018). Artificial Intelligence Adoption: AI-readiness at Firm-Level. *PACIS*, 4, 231-245.
- Alshirah, M. H., Alshira'h, A. F., & Lutfi, A. (2022). Political connection, family ownership, and corporate risk disclosure: Empirical evidence from Jordan. *Meditari Accountancy Research*, 30(5), 1241-1264.
- Alshirah, M., Lutfi, A., Alshirah, A., Saad, M., Ibrahim, N. M. E. S., & Mohammed, F. (2021). Influences of the environmental factors on the intention to adopt cloud-based accounting information system among SMEs in Jordan. *Accounting*, 7(3), 645-654.
- Backof, A. G., Bowlin, K., & Goodson, B. M. (2022). The importance of clarification of auditors' responsibilities under the new audit reporting standards. *Contemporary Accounting Research*, 39(4), 2284-2304.
- Baysinger, B. D., & Butler, H. N. (2019). Corporate governance and the board of directors: Performance effects of changes in board composition. In *Corporate Governance* (pp. 215-238).
- Bradford, M., Henderson, D., Baxter, R. J., & Navarro, P. (2020). Using generalized audit software to detect material misstatements, control deficiencies, and fraud: How financial and IT auditors perceive net audit benefits. *Managerial Auditing Journal*, 35(4), 521-547.
- Burnett, J. R., & Lisk, T. C. (2021). The future of employee engagement: Real-time monitoring and digital tools for engaging a workforce. In *International Perspectives on Employee Engagement* (pp. 117-128). Routledge.
- Chege, S. M., & Wang, D. (2020). Information technology innovation and its impact on job creation by SMEs in developing countries: an analysis of the literature review. *Technology Analysis & Strategic Management*, 32(3), 256-271.
- Cho, S. J., Chung, C. Y., & Young, J. (2019). Study on the Relationship between CSR and Financial Performance. *Sustainability*, 11(2), 343.
- Chu, M. K., & Yong, K. O. (2021). Big data analytics for business intelligence in accounting and audit. *Open Journal of Social Sciences*, 9(9), 42-52.
- Clohesy, T., & Acton, T. (2019). Investigating the influence of organizational factors on blockchain adoption: An innovation theory perspective. *Industrial Management & Data Systems*, 119(7), 1457-1491.
- Dewar, R., & Hage, J. (2018). Size, technology, complexity, and structural differentiation: Toward a theoretical synthesis. In *Organizational Innovation* (pp. 293-318). Routledge.
- Dohle, S., Wingen, T., & Schreiber, M. (2020). Acceptance and adoption of protective measures during the COVID-19 pandemic: The role of trust in politics and trust in science. *Social Psychological Bulletin*, 15(4), 1-23.
- Eltweri, A., Faccia, A., & Cavaliere, L. P. L. (2021). The role of culture on the adoption of International Standards on Auditing in the developing countries: An institutional perspective. *Journal of Governance and Regulation*, 9(4), 162-171.
- Ernst, R., & Haar, J. (2019). *Globalization, competitiveness, and governability: The three disruptive forces of business in the 21st century*. Springer.
- Hair Jr, J. F., Howard, M. C., & Nitzl, C. (2020). Assessing measurement model quality in PLS-SEM using confirmatory composite analysis. *Journal of business research*, 109, 101-110.
- Johnson, D. A., Jackson, C. L., Williams, N. J., & Alcántara, C. (2019). Are sleep patterns influenced by race/ethnicity—a marker of relative advantage or disadvantage? Evidence to date. *Nature and science of sleep*, 79-95.
- Kabeyi, M. (2019). Organizational strategic planning, implementation, and evaluation with analysis of challenges and benefits. *International Journal of Applied Research and Studies*, 5(6), 27-32.
- Kerzner, H. (2019). *Using the project management maturity model: strategic planning for project management*. John Wiley & Sons.
- Khasanah, U., Mulyani, S., Akbar, B., & Dahlan, M. (2021). The Impact of Project Management and Implementing Enterprise Resource Planning on Decision-Making Effectiveness: The Case of Indonesian State-Owned Enterprises. *Academy of Strategic Management Journal*, 20, 1-12.
- Kokko, K. (2023). *Product portfolio management as part of product lifecycle management for configure-to-order products* (Master's thesis, K. Kokko).

- Lamboglia, R., Lavorato, D., Scornavacca, E., & Za, S. (2021). Exploring the relationship between audit and technology. A bibliometric analysis. *Meditari Accountancy Research*, 29(5), 1233-1260.
- Lee, C. S., & Tajudeen, F. P. (2020). Usage and impact of artificial intelligence on accounting: Evidence from Malaysian organizations. *Asian Journal of Business and Accounting*, 13(1).
- Lee, J., Suh, T., Roy, D., & Baucus, M. (2019). Emerging technology and business model innovation: the case of artificial intelligence. *Journal of Open Innovation: Technology, Market, and Complexity*, 5(3), 44.
- Li, H., Dai, J., Gershberg, T., & Vasarhelyi, M. A. (2018). Understanding usage and value of audit analytics for internal auditors: An organizational approach. *International Journal of Accounting Information Systems*, 28, 59-76.
- Liu, H., Liu, C., Zhao, W., Jiang, Y., & Sun, J. (2018, September). S-gram: towards semantic-aware security auditing for Ethereum smart contracts. In *Proceedings of the 33rd ACM/IEEE International Conference on Automated Software Engineering* (pp. 814-819).
- Lutfi, A., Alkelani, S. N., Alqudah, H., Alshira'h, A. F., Alshirah, M. H., Almaiah, M. A., ... & Abdelmaksoud, O. (2022). The role of E-accounting adoption on business performance: the moderating role of COVID-19. *Journal of Risk and Financial Management*, 15(12), 617.
- Lutfi, A., Al-Khasawneh, A. L., Almaiah, M. A., Alshira'h, A. F., Alshirah, M. H., Alsyouf, A., ... & Ali, R. A. (2022). Antecedents of big data analytic adoption and impacts on performance: contingent effect. *Sustainability*, 14(23), 15516. [HTTPS://DOI.ORG/10.3390/SU142315516](https://doi.org/10.3390/SU142315516).
- Mansour, M., Al Zobi, M. T., Saleh, M. W., Al-Nohood, S., & Marei, A. (2023B). The board gender composition and cost of debt: Empirical evidence from Jordan. *Business Strategy & Development*. doi.org/10.1002/bsd2.300
- Mansour, M., Mo'taz Al Zobi Jordan, M. S., Daoud, L., & Marei, A. (2023A). DOES EXECUTIVE COMPENSATION MATTER TO BANK PERFORMANCE? ExPERIMENTAL EVIDENCE FROM JORDAN. [http://dx.doi.org/10.21511/bbs.18\(3\).2023.14](http://dx.doi.org/10.21511/bbs.18(3).2023.14).
- Mansour, M., Saleh, M. W., Marashdeh, Z., Marei, A., Alkhodary, D., Al-Nohood, S., & Lutfi, A. (2024). Eco-Innovation and Financial Performance Nexus: Does Company Size Matter? *Journal of Open Innovation: Technology, Market, and Complexity*, 100244.
- Marei, A. (2022). The effect of e-procurement on financial performance: Moderating the role of competitive pressure. *Uncertain Supply Chain Management*, 10(3), 855-866.
- Marei, A. (2023). Financial performance persistence in Islamic and conventional fund family: Developing market evidence. *Decision Science Letters*, 12(4), 659-670.
- Marei, A., Abou-Moghli, A., Shehadeh, M., Salhab, H., & Othman, M. (2023). Entrepreneurial competence and information technology capability as indicators of business success. *Uncertain Supply Chain Management*, 11(1), 339-350.
- Marei, A., Al-Haddad, S., Daoud, L., Habashneh, A., Fariz, R., & Aldamisi, R. (2022). The impact of innovation on customer satisfaction in the commercial banks: Business performance as a mediating variable. *Uncertain Supply Chain Management*, 10(3), 887-894.
- Marei, A., Ashal, N., Abou-Moghli, A., Daoud, L., & Lutfi, A. (2024). The effect of strategic orientation on operational performance: the mediating role of operational sustainability. *Business Strategy Review*, 5(1), 346-355.
- Miller, D. (2019). The resource-based view of the firm. In *Oxford Research Encyclopedia of Business and Management*.
- Min, S., So, K. K. F., & Jeong, M. (2021). Consumer adoption of the Uber mobile application: Insights from the diffusion of innovation theory and technology acceptance model. In *Future of tourism marketing* (pp. 2-15). Routledge.
- Mujalli, A., & Almgrashi, A. (2020, December). A conceptual framework for generalized audit software adoption in Saudi Arabia by government internal auditing departments using an integrated institutional theory-TOE model. In *2020 IEEE Asia-Pacific Conference on Computer Science and Data Engineering (CSDE)* (pp. 1-8). IEEE.
- Nguyen, H., Tran, T. H. M., NGUYEN, T. H. Y., & TRUONG, D. D. (2021). The influence of competitive advantage on financial performance: A case study of SMEs in Vietnam. *The Journal of Asian Finance, Economics and Business*, 8(5), 335-343.
- Normahazan, N. N., Mohamed, I. S., & Rozzani, N. (2020). Drivers contributing to the implementation of generalized audit software (GAS) within audit firms in Malaysia. *Business and Economic Research*, 10(2), 341-354.
- Patton, W., & McMahon, M. (2021). Career development and systems theory: Connecting theory and practice. In *Career Development and Systems Theory*. Brill.
- Pumplun, L., Tauchert, C., & Heidt, M. (2019). A new organizational chassis for artificial intelligence-exploring organizational readiness factors.
- Qin, Z., & Chen, P. K. (2022). Enhancing the resilience of sustainable supplier management through the combination of win-win lean practices and auditing mechanisms—An analysis from the resource-based view. *Frontiers in Environmental Science*, 10, 962008.
- Rejeb, A., Keogh, J. G., Simske, S. J., Stafford, T., & Treiblmaier, H. (2021). Potentials of blockchain technologies for supply chain collaboration: a conceptual framework. *The International Journal of Logistics Management*, 32(3), 973-994.
- Rogers, E. M. 2003. Diffusion of innovations. New York: Free Press.
- Rogers, W. A., & Fisk, A. D. (2010). Toward a psychological science of advanced technology design for older adults. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, 65(6), 645-653.
- Saad, M., Lutfi, A., Almaiah, M. A., Alshira'h, A. F., Alshirah, M. H., Alqudah, H., ... & Abdelmaksoud, O. (2022). Assessing the intention to adopt cloud accounting during COVID-19. *Electronics*, 11(24), 4092.

- Salijeni, G., Samsonova-Taddei, A., & Turley, S. (2021). Understanding how big data technologies reconfigure the nature and organization of financial statement audits: A socio-material analysis. *European Accounting Review*, 30(3), 531-555.
- Sandri, S., Hussein, H., & Alshyab, N. (2020). Sustainability of the energy sector in Jordan: Challenges and opportunities. *Sustainability*, 12(24), 10465.
- Sayginer, C., & Ercan, T. (2020). Understanding determinants of cloud computing adoption using an integrated diffusion of innovation (DOI)-technological, organizational, and environmental (toe) model. *Humanities & Social Sciences Reviews*, 8(1), 91-102.
- Serpeninova, Y., Makarenko, S., & Litvinova, M. (2020). Computer-assisted audit techniques: Classification and implementation by auditor. *Public Policy and Accounting*, (1 (1)), 44-49.
- Shahadat, M. H., Nekmahmud, M., Ebrahimi, P., & Fekete-Farkas, M. (2023). Digital Technology Adoption in SMEs: What Technological, Environmental, and Organizational Factors Influence in Emerging Countries? *Global Business Review*, 09721509221137199.
- Shaheen, N., Al-Haddad, S., Marei, A., & Daoud, L. (2023). The Effect of Creativity on Entrepreneurial Behavior: The Moderating Role of Demographics. *Information Sciences Letters*, 12(3), 1365-1372.
- Sharabati, A., Almokdad, N., Marei, A., & Abusaimah, H. (2023). Competitive strategy development through green supply chain practices. *Uncertain Supply Chain Management*, 11(4), 1507-1518.
- Siew, E. G., Rosli, K., & Yeow, P. H. (2020). Organizational and environmental influences in the adoption of computer-assisted audit tools and techniques (CAATs) by audit firms in Malaysia. *International Journal of Accounting Information Systems*, 36, 100445.
- Sulaiman, H., & Magaireah, A. I. (2014, November). Factors affecting the adoption of integrated cloud-based e-health record in healthcare organizations: A case study of Jordan. In *Proceedings of the 6th International Conference on Information Technology and Multimedia* (pp. 102-107). IEEE.
- Wadho, W., & Chaudhry, A. (2018). Innovation and firm performance in developing countries: The case of Pakistani textile and apparel manufacturers. *Research Policy*, 47(7), 1283-1294.
- Wamba-Taguimdje, S. L., Fosso Wamba, S., Kala Kamdjoug, J. R., & Tchatchouang Wanko, C. E. (2020). Influence of artificial intelligence (AI) on firm performance: the business value of AI-based transformation projects. *Business Process Management Journal*, 26(7), 1893-1924.
- Weiner, B. J. (2020). A theory of organizational readiness for change. *Handbook on implementation science*, 215-232.
- Wijayanto, A., Dzulkrirom, M., & Nuzula, N. F. (2019). The effect of competitive advantage on financial performance and firm value: evidence from Indonesian manufacturing companies. *Russian Journal of Agricultural and Socio-Economic Sciences*, 85(1), 35-44.
- Zaini, M. K., Masrek, M. N., Johari, M. K., Sani, A., & Anwar, N. (2018). Theoretical Modeling of Information Security: Organizational Agility Model based on Integrated System Theory and Resource-Based View. *International Journal of Academic Research in Progressive Education and Development*, 7(3).
- Zhang, J., Tan, Y., Zhang, T., Yu, K., Wang, X., & Zhao, Q. (2020A). Natural gas market and underground gas storage development in China. *Journal of Energy Storage*, 29, 101338.
- Zhang, Q., Cao, M., Zhang, F., Liu, J., & Li, X. (2020B). Effects of corporate social responsibility on customer satisfaction and organizational attractiveness: A signaling perspective. *Business ethics: A European Review*, 29(1), 20-34.



© 2024 by the authors; licensee Growing Science, Canada. This is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC-BY) license (<http://creativecommons.org/licenses/by/4.0/>).