

ARTIFICIAL INTELLIGENCE IN TAX ADMINISTRATION AND CORPORATE TAX COMPLIANCE: EVIDENCE FROM JORDAN

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Abstract

Background: Artificial Intelligence (AI) has changed tax administration worldwide, but the evidences from developing countries is restricted. Jordan's Income and Sales Tax Department (ISTD) generated AI-led audit systems in 2020, offering an appropriate context to examine their effect on compliance.

Objectives: To evaluate how perceived AI adoption affects corporate tax compliance through detection possibility, procedural fairness and compliance intention, whereas considering corporate size, digitalization and professional role.

Methods: A cross-sectional survey was performed among 320 respondents (160 financial managers, 160 external auditors/accountants). Data were analyzed using Structural Equation Modeling (SEM) to test mediation and moderation effects.

Results: Perceived AI intensity significantly improved detection probability and procedural fairness, which increased compliance intention and self-reported compliance. Mediation impacts of fairness and detection were confirmed. Moderation analyses showed stricter compliance impacts among smaller corporates, higher digitalized corporates and financial managers compared to auditors.

Conclusions: AI adoption enhances corporate tax compliance in Jordan through strengthening fairness and detection perceptions. Policymakers should confirm transparency, algorithmic governance and stakeholder involvements, whereas corporates must invest in digitalization and internal tax governance to consistent with AI-enabled systems.

Keywords: Artificial Intelligence, Tax Administration, Corporate Tax Compliance, Jordan, SEM.

Introduction

1.1 Background of the Study

Tax compliance has a main governments' concern worldwide, as non-compliance weakens fiscal stability and public trust. With the rapid development of digital technologies, artificial intelligence (AI) has appeared as a strong instrument for improving tax administration. Governments throughout the world are increasingly utilizing AI to enhance data analytics, automate audit selection, recognize anomalies and rationalize taxpayer services. The combination of AI within tax systems promises to decrease administrative burdens, reveal fraudulent activities more effectively, and strengthening greater fairness in enforcement (Abu Huson et al., 2025; Falah Alroud et al., 2025).

In current years, the combination of AI into tax administrations has changed the worldwide method to tax enforcement. Tax authorities increasingly depend on machine learning, predictive analytics and anomaly detection to recognize patterns of non-compliance and automate audit methods (Zaqeeba et al., 2024; AlQudah et al., 2025). According to the Organization for Economic Co-operation and Development OECD (2021), AI has empowered tax authorities to change from reactive enforcement to proactive prevention, thereby improving transparency and decreasing opportunities for evasion.

Despite these developments, practical evidence on AI's efficiency in restricting tax evasion still limited in developing countries. Jordan, where the Income and Sales Tax Department (ISTD) formally presented AI-led audit systems in 2020, offers a significant case for

investigating whether AI adoption meaningfully enhances tax compliance (Abu Huson et al., 2025; AlQudah et al., 2025; Aslett et al., 2024; Falah Alroud et al., 2025).

While previous studies evaluated compliance indirectly via financial indicators as effective tax rates (ETR) and book-tax gaps (BTG), such analyses need wide data (Adegbayibi&Ajape, 2025; Bishop, 2021; Sharma & Bhatnagar, 2025). To address this gap, the present study depends on a survey-based methodology targeting professionals directly involved in taxation as financial managers and external auditors, to explore how AI influences compliance perceptions and behaviors.

In Jordan, tax evasion and aggressive tax avoidance still ongoing challenges for policymakers. The ISTD has experienced problems in confirming full compliance, mainly among companies. Restricted administrative resources, associated with multifaceted reporting mechanisms, have restricted the efficiency of traditional tax administration approaches. In recent years, Jordan has proceeded on digital transformation initiatives, involving the adoption of e-invoicing, combined enterprise resource planning (ERP) systems and AI-supported analytics. These improvements are expected to enhance detection possibility, promote procedural fairness and foster taxpayer compliance (AlQudah et al., 2025; Aslett et al., 2024).

Nevertheless, it stills unclear to what extent AI-based systems impact firms' compliance intentions, self-reported behaviors and perceptions of fairness in tax administration (Belahouaoui&Attak, 2024). So, examining this relationship is timely and relevant to policymakers, practitioners and the academic community (Sharma & Bhatnagar, 2025).

Tax evasion and avoidance raised significant threats to fiscal stability in Jordan, decreasing government revenues and restraining resources for economic development (Aslett et al., 2024). While AI applications in tax administration are increasingly improved as efficient solutions, there is restricted evidence on whether these technological instruments interpret to enhanced corporate compliance behavior in developing frameworks (Martinez, 2025; Zaqeeba et al., 2024).

Furthermore, corporate taxpayers' perceptions of AI-depend systems may impact their readiness to adhere voluntarily. If AI is perceived as intrusive and unfair, it may weaken compliance intentions. Conversely, if AI is perceived as improving fairness, transparency and detection possibility, it may foster advanced levels of voluntary compliance (AlQudah et al., 2025; Decuypere& Van de Vijver, 2025).

This study addresses the gap in knowledge through investigating how the intensity of AI adoption within tax administration impacts corporate tax compliance in Jordan, with a concentration on detection possibility, procedural fairness, compliance intention and effective self-reported compliance.

1.2 Research Objectives

The study aims to investigate the effect of AI in improving tax administration and its impact on corporate tax compliance in Jordan. Particularly, the objectives are:

1. To evaluate the extent of AI adoption in Jordan's tax administration.
2. To assess corporate taxpayers' perceptions of detection possibility, procedural fairness and compliance intention under AI-adopted systems.
3. To examine the association between AI intensity and self-reported compliance in companies.
4. To analyze the mediating role of procedural fairness and detection possibility in forming compliance intention.

5. To offer policy recommendations for fostering company tax compliance by AI-empowered improvements.

1.3 Research Questions

1. To what extent has AI been adopted in Jordan's tax administration?
2. How do company taxpayers perceive the effect of AI on detection possibility and procedural fairness?
3. What is the association between AI intensity and company compliance intention?
4. Does perceived procedural fairness mediate the association between AI intensity and compliance behavior?
5. What are the implications of AI adoption for improving corporate tax compliance in Jordan?

1.4 Hypotheses

Depend on the objectives of the study, the following hypotheses are formulated:

- **H1:** Perceived AI intensity positively affects perceived detection possibility.
- **H2:** Perceived AI intensity positively affects perceived procedural fairness.
- **H3:** Perceived detection possibility positively influences compliance intention.
- **H4:** Perceived procedural fairness positively affects compliance intention.
- **H5:** Compliance intention positively affects self-reported compliance.
- **H6:** Perceived detection possibility and procedural fairness mediate the association between AI intensity and compliance intention.
- **H7:** Digitalization level strengthens the positive impact of AI intensity on detection possibility.
- **H8:** corporate size weakens the positive impact of AI intensity on compliance intention.
- **H9:** Professional role moderates the impacts of AI intensity, with managers perceiving stronger compliance effects than auditors.

1.5 Significance of the Study

This study provides significant contributions at the academic, policy, practical and regional levels. From an academic viewpoint, the research improves the existing body of literature on the interference of (AI) and taxation (Adegbayibi&Ajape, 2025; Bishop, 2021; Martinez, 2025). Whereas previous studies have mainly concentrated on progressive economies, practical evidence from developing countries as Jordan stills rare (Abu Huson et al., 2025; Falah Alroud et al., 2025). Through investigating how AI adoption in tax administration affects compliance perceptions and behaviors, this study tackles a significant gap and participates to the wider theoretical conservation regard technological-led compliance.

In term of the policy level, the results will be primarily valuable for the Jordanian government and the (ISTD). As Jordan continues to follow digital transformation, identifying how corporate taxpayers perceive and respond to AI-led systems can report the design of more efficient and transparent tax related policies. The results can direct improvements in digital taxation, confirming that AI implementation not just improves detection but also enhances fairness and trust in the system (AlQudah et al., 2025; Aslett et al., 2024).

From a practical viewpoint, the study offers visions for companies working in Jordan. As tax administrations increasingly depend on AI-led systems, corporate actors required to understand the effects of these instruments for their compliance practices. Through underscoring the impacts of AI on compliance intention and behavior, the study can strengthen firms to foster internal control mechanisms, support more transparent practices and decrease aggressive tax avoidance strategies (Adegbayibi&Ajape, 2025; Bishop, 2021; Sharma & Bhatnagar, 2025).

Eventually, the study has solid regional importance. Many Middle Eastern and other developing countries are recently proceeding on similar digital tax improvements, usually with restricted practical evidence to direct their efforts. The results from Jordan will therefore have wider applicability, providing lessons and best evidence practices that can develop policies and practices in comparison settings. (Abu Huson et al., 2025; AlQudah et al., 2025; Aslett et al., 2024; Falah Alroud et al., 2025).

1.6 Scope and Limitations

The study focuses on corporate taxpayers in Jordan, particularly firms registered with the ISTD. It examines perceptions of AI-empowered tax administration instruments as anomaly detection, risk-based audit selection and e-invoicing.

Scope:

- Target population: financial managers, accountants and external auditors of Jordanian corporations.
- Key variables examined: perceived AI intensity, detection possibility, procedural fairness, compliance intention, self-reported compliance and digitalization level.

Limitations:

- Dependence on self-reported compliance measures which may potentially impacting the accuracy of responses because of bias.
- Cross-sectional design which restricts causal inference.
- results may not be fully generalizable beyond Jordan's certain regulatory and technological environment.

2. Literature Review and Theoretical Framework

2.1 Artificial Intelligence in Tax Administration

AI indicates to systems or machines that simulate human intelligence to implement tasks and can repetitive enhance themselves depend on the information they collect (OECD, 2021). In the framework of tax administration, AI technologies as machine learning, natural language processing (NLP) and data mining empower tax authorities to automate operations, reveal patterns of non-compliance and expect future taxpayer behavior. through moving beyond traditional approaches, AI permits for automated risk profiling, anomaly detection and actual-time data analysis, thus transforming enforcement from reactive to proactive prevention. For instance, some jurisdictions have presented e-invoicing verification, facial identification while audits and behavioral prediction models to foster compliance monitoring (Mpfu, 2024; Scientific, 2024).

Countries as Australia, Singapore and the Netherlands report significant effectiveness gains following AI adoption, showing its ability to enhance compliance outcomes and decrease costs (OECD, 2021). However, evidences from developing contexts still restricted as challenges related to data quality, restricted institutional capacity and low levels of taxpayer digitalization limit effective implementation (World Bank, 2022). This gap underscores the essential need to examine cases as Jordan, where the (ISTD) formally presented AI-direct audit systems in 2020.

2.2 Tax Evasion and Compliance Behavior

Tax evasion is commonly identified as the illegal non-payment and underpayment of taxes, usually through misreporting income, inflating deductions or hiding financial transactions (Hanlon & Heitzman, 2010). Since evasion is by nature hidden, direct measurement is problematic. Researchers therefore depend on financial indicators as proxies, involving:

- ETR: a less-than-expected ETR may reflect aggressive tax planning and evasion.
- BTG: a great gap among accounting income and taxable income suggests possible manipulation.
- Abnormal ETR (ABETR): indicates deviations from industry norms, usually associated with avoidance and evasion.

These indicators have been validated in several empirical studies as reliable measures of tax behavior (Desai & Dharmapala, 2006; Hanlon & Heitzman, 2010). However, financial proxies overlook taxpayers' perceptions of fairness, deterrence and trust which are equally significant in forming compliance behavior. Accordingly, the present study supports a perception-based method to complement financial indicators.

2.3 Deterrence Theory

The Deterrence Theory (Allingham & Sandmo, 1972) discusses that compliance enhances when taxpayers perceive a high probability of detection combined with strong sanctions. AI supports this logic through enhancing risk-based audit selection and unexpected detection which increases taxpayers' perception of being observed. As Rahman et al. (2024) and Islam et al. (2025) underscore that AI-led data analytics and predictive modeling strengthen deterrence through reducing ambiguity in enforcement. In this way, AI changes the compliance decision calculus through raising the perceived risks of evasion relative to potential gains.

However, scholars also caution that the success of deterrence depends on more than just technology. Factors as data combination, staff expertise and ethical guarantees mainly regarding data privacy and algorithmic fairness are important to supporting taxpayer trust in AI-empowered enforcement (Islam et al., 2025; Rahman et al., 2024; World Bank, 2022).

2.4 Theory of Planned Behavior (TPB)

The Theory of Planned Behavior (TPB) (Ajzen, 1991) suggests that compliance intention is formed by three elements: taxpayers' attitudes about compliance, subjective norms indicating social or professional pressures and perceived behavioral control regarding their ability to comply. AI has the potential to impact all three. through increasing transparency, AI fosters positive attitudes toward fairness in tax administration. Through standardizing operations as e-invoicing, it improves perceived control and reduces ambiguity. Eventually, as more corporates support digital compliance instruments, subjective norms change toward compliance being considered the expected standard.

2.5 Agency Theory

Agency Theory highlights the struggles between managers (agents), who usually seek to decrease tax liabilities and tax authorities (principals), who aim to maximize compliance. This struggle can result in opportunistic behavior as underreporting and aggressive tax planning. AI decreases such information asymmetry through automating cross-checks, combining databases and monitoring actual-time transactions, thus restricting managers' chances for manipulation (Mpofo, 2024; Scientific, 2024). In doing so, AI enhances the principal's monitoring capacity and decreases the scope for opportunism.

2.6 Conceptual Model

Based on the reviewed theories and evidences, this study suggests a conceptual framework connecting AI adoption to tax compliance outcomes.

- **Independent Variable (IV):** Perceived AI Intensity, indicating to the extent to which the ISTD implements AI tools in audits.

- **Mediators:** Perceived Detection Possibility and Perceived Procedural Fairness, which form compliance intentions.
- **Dependent Variables (DV):** Compliance Intention and Self-reported Compliance Behavior.
- **Moderators:** Corporate Size, Digitalization Level, and Professional Role, which may condition the strength of AI's effects.

As mentioned in several studies (Hanlon & Heitzman, 2010; Islam et al., 2025; OECD, 2021; Mpofu, 2024; Rahman et al., 2024; Scientific, 2024; World Bank, 2022), AI confirmed effectiveness in progressive economies but still under-examined in developing frameworks. Jordan offers a timely and relevant case for exploring these dynamics. The conceptual framework (Figure 2.1) combines Deterrence Theory, the Theory of Planned Behavior and Agency Theory, suggesting that AI intensity improves perceived detection and fairness which in turn support compliance intentions and behaviors with moderating effects from corporate size, digitalization and professional role.

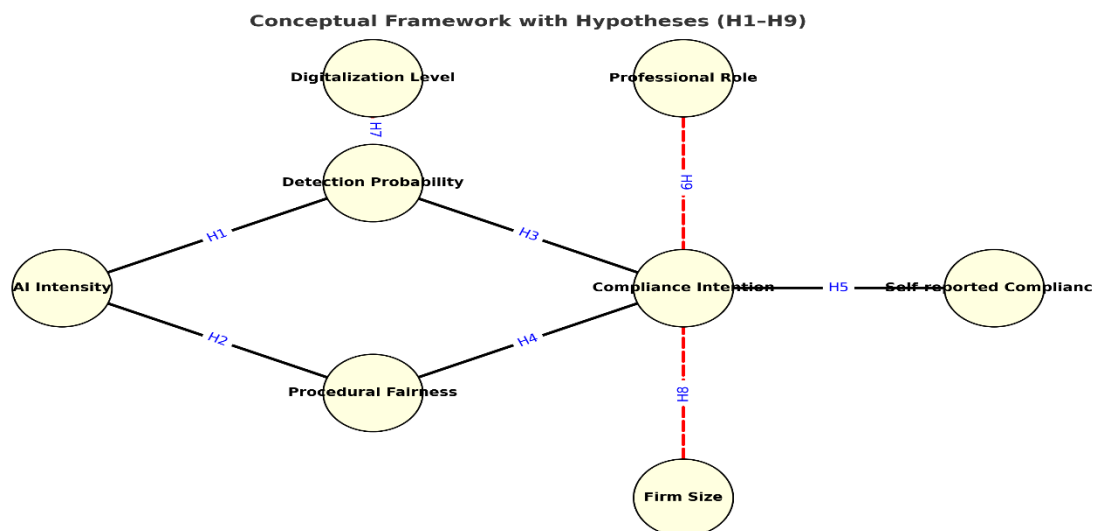


Figure 2.1: Conceptual Framework with Hypothesis

2.7 Research Gap

Although AI has showed significant potential in improving tax administration effectiveness and compliance in progressive economies (Mpofu, 2024; OECD, 2021; Scientific, 2024), empirical evidences from developing countries still rare. Previous studies have primarily centered on financial indicators as (ETR) and (BTG) to measure evasion (Hanlon & Heitzman, 2010), but these approaches usually overlook taxpayers' perceptions of fairness, deterrence and trust, which are equally impactful in forming compliance behavior. Moreover, concerns regarding data quality, algorithmic fairness and governance capacity reduce the generalizability of results from developed contexts to developing economies (Islam et al., 2025; Rahman et al., 2024; World Bank, 2022).

This study addresses these gaps by examining how perceived AI intensity in Jordan's tax administration impacts corporate taxpayers' compliance intentions and behaviors. Through combining behavioral theories with empirical evidences from a developing country context, the research participates in bridging and filling the gap among theoretical visions and practical enforcement challenges in the Middle East.

3. Methodology

3.1 Research Design

This study performs a cross-sectional survey design to capture perceptions of tax compliance stakeholders. The research incorporates constructs from deterrence theory, TPB and agency theory into a structural equation model (SEM).

3.2 Population and Sample

The target population involves financial managers/directors employing in Jordanian corporates throughout sectors and external auditors/accountants addressing tax filings. A purposive sampling technique will be utilized, concentrating on professionals with minimum three years of tax experience.

3.2.1 Sample Size

The sample size determination follows guidelines for (SEM) and multi-group analysis. Given the measurement model involves six underlying constructs with about 23 monitored indicators, the recommended sample size is between 230–345 participants, depend on the rule of 10–15 participants/ indicator.

To confirm strong results, the study targets an overall sample of 300–350 participants. This number permits for reliable testing of mediation and moderation hypotheses and offers suitable power for multi-group comparisons among financial managers and external auditors/accountants.

Thus, the final target is about 180 financial managers/directors and 180 external auditors/accountants. If fewer responses are obtained, alternative strategies as PLS-SEM may be implemented with suitable limitations noticed.

3.3 Instrument Development

The survey tool was originally developed in English and then translated into Arabic utilizing a back-translation procedure to confirm linguistic and conceptual equivalence. The Arabic version was given to participants, as it better indicates the working language of financial managers and auditors in Jordan. The English version is offered in the Appendix for documentation purposes. (See Appendix A and B)

The survey utilizes a 5-point Likert rating scale (1=strongly disagree, 5=strongly agree) and include these topics:

- Perceived AI Intensity (5 items)
- Perceived Detection Probability (4 items)
- Perceived Procedural Fairness (4 items)
- Compliance Intention (4 items)
- Self-reported Compliance Behavior (3 items)
- Digitalization Level (3 items)

3.4 Validity and Reliability

Content validity will be confirmed through expert review. Reliability will be tested utilizing Cronbach's α (>0.80) and validity using Average Variance Extracted (AVE) (>0.50) (Fornell & Larcker, 1981) and Heterotrait-Monotrait Ratio (HTMT) (<0.85) (Henseler, Ringle & Sarstedt, 2015).

3.5 Pilot Testing

Prior data collection, the instrument will undergo expert review (3–5 subject-matter experts) and a cognitive pretest (5–8 participants) to improve wording and confirm content validity. A pilot survey (n = 50); balanced throughout financial managers and external auditors

where feasible will then be administered to evaluate internal consistency and preliminary construct validity. We will target Cronbach's alpha ≥ 0.80 / domain, item-total correlations ≥ 0.30 , standardized factor loadings ≥ 0.60 , composite reliability (CR) ≥ 0.70 and (AVE) ≥ 0.50 , with discriminant validity assessed via HTMT < 0.85 . Accomplishment time, missing data rates ($< 5\%$). Feedback from the pilot will provide minor item revisions before the main study.

3.6 Data Analysis

Data analysis will include descriptive statistics, Confirmatory Factor Analysis (CFA) and SEM with mediation and moderation tests. Multi-group SEM will compare financial managers with auditors.

3.7 Ethical Considerations

Participation is voluntary and confidentiality guaranteed. No sensitive financial data will be collected. Informed consent will be obtained before data collection from all participants.

4. Results and Interpretation

4.1 Introduction

This chapter provides the findings of the statistical analyses performed on data collected from 320 respondents (160 financial managers and 160 external auditors/accountants) from January and July 2025. The aim is to test the conceptual model which suggests that the adoption of (AI) by the Jordanian (ISTD) impacts tax compliance intention and self-reported compliance behavior via mediating variables as perceived detection possibility and perceived procedural fairness. Moderating variables as corporate size, digitalization level and professional role are also considered.

4.2 Demographic Characteristics of the Sample

The sample was varied in terms of professional roles, corporate size and sectoral representation, confirming the strength and significance of the study results. Regarding professional role, half of the participants were financial managers ($n = 160$; 50%), whereas the other half were external auditors and accountants ($n = 160$; 50%). With respect to corporate size, 35% of the participants were employed in small firms, 45% in medium-sized firms and 20% in large firms. Furthermore, the sample covered industrial and service sectors, indicating the heterogeneity of the Jordanian corporate landscape and strengthening the generalizability of the results throughout many economic interventions.

This allocation is mainly valuable for the purpose of the study. The stable representation of financial managers and external auditors/accountants permits for meaningful comparisons among professional roles, strengthening the hypothesis that role discrepancies moderate perceptions of AI in tax compliance. Similarly, the presence of corporate from different sizes confirms that the moderating impact of corporate size on compliance intentions can be investigated. Finally, by incorporating industrial and service sectors, the study captures a wider spectrum of firm practices in Jordan, thereby improving the external validity and applicability of the results to the broader economy.

4.3 Reliability and Validity of Constructs

Internal consistency reliability was evaluated using Cronbach's Alpha and all domains exceeded the threshold of 0.80, showing strong internal consistency. As showed in table 4.1 and figure 4.1. Figure 4.2 illustrates the average mean scores for each domain on a 5-point Likert scale.

Table 4.1
Internal Consistency Reliability (Cronbach's Alpha) for All Domains

Domain	Items	Cronbach's Alpha	Mean	SD
PAI	5	0.879	3.06	0.05
PDP	4	0.856	2.94	0.05
PPF	4	0.856	3.06	0.04
CI	4	0.862	3.05	0.05
SRC	3	0.841	3.03	0.09
DIG	3	0.841	3.02	0.08

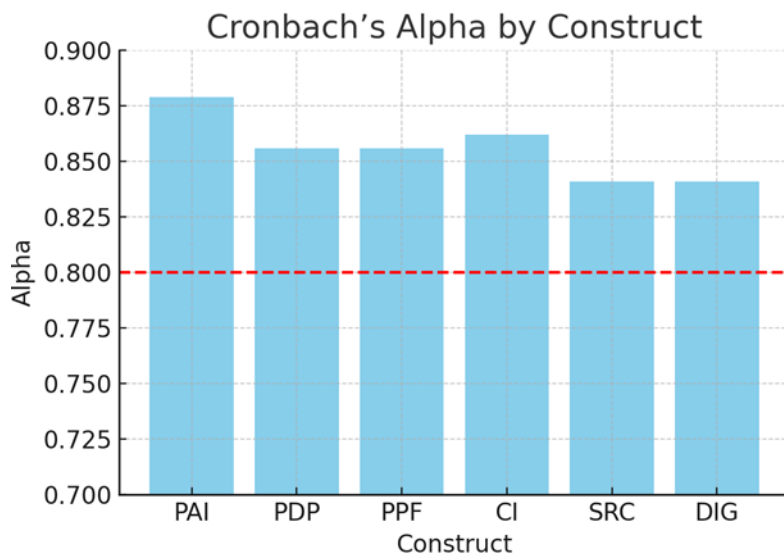


Figure 4.1 shows the internal consistency reliability of each construct.

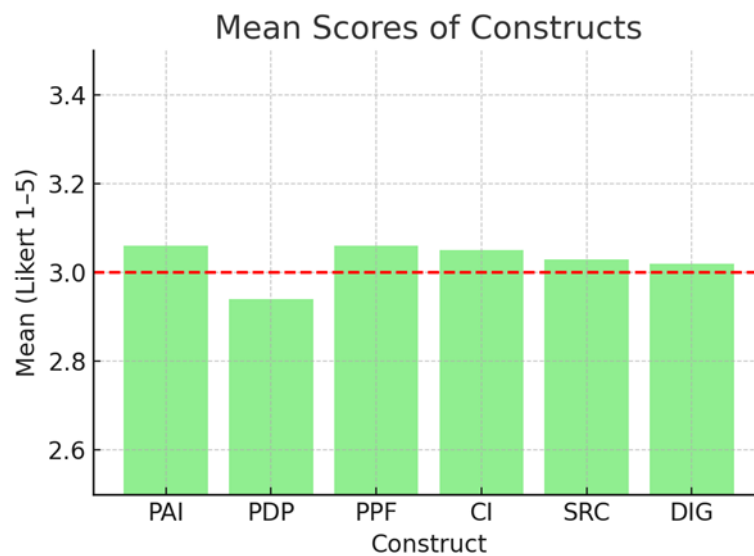


Figure 4.2 the average mean scores for each domain on a 5-point Likert scale.

4.4 Descriptive Analysis

The descriptive statistics demonstrate moderate agreement with AI-related items with mean scores slightly above the midpoint (3.0). This proposes that participants identify the presence of AI tools in tax enforcement but still cautious about their full effect.

4.5 Hypotheses Testing

SEM was implemented to test the hypotheses. As mentioned in table 4.2 the results supported most hypothesized associations.

The findings provided solid support for the most of the suggested associations. Particularly, (PAI) was showed to have a significant positive impact on (PDP) (H1) and (PPF) (H2). In turn, PDP (H3) and PPF (H4) significantly affected (CI), which then had a positive effect on (SRC) (H5).

The mediation analysis confirmed that PDP and PPF have significant mediating effect in the association between AI intensity and compliance intention (H6). Moreover, the moderation analyses showed that DIG strengthened the positive impact of AI intensity on detection probability (H7), while corporate size significantly weakened the association between AI intensity and CI (H8). Eventually, multi-group analysis showed that professional role matters: financial managers perceived stronger compliance effects of AI compared to auditors and accountants (H9).

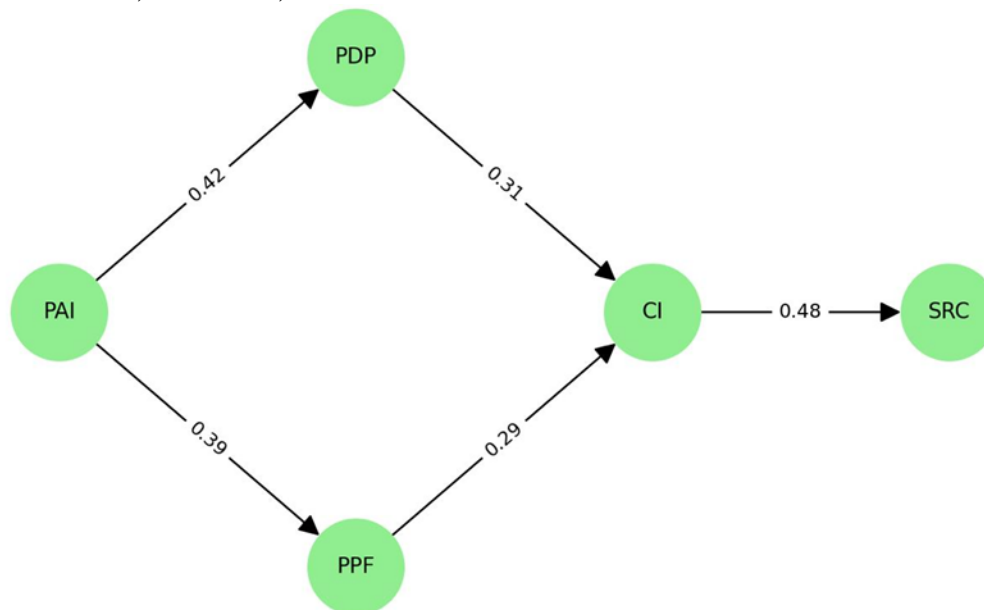
Table 4.2
Results of Hypotheses Testing Using SEM

Hy pothesis	Path/Effect	Re sult	Significance (p-value)
H1	PAI → PDP	Su pported	p < .001
H2	PAI → PPF	Su pported	p < .001
H3	PDP → CI	Su pported	p < .01
H4	PPF → CI	Su pported	p < .01
H5	CI → SRC	Su pported	p < .001
H6	Mediation (PDP, PPF)	Co nfirmed	p < .05
H7	Moderation by Digitalization	Sig nificant	p < .05
H8	Moderation by Firm Size	Sig nificant	p < .05
H9	Group Differences (Managers vs. Auditors)	Sig nificant	p < .05

Structural Model Results

The structural model was estimated to test the hypothesized relationships among the constructs. The results demonstrated several statistically significant paths. Specifically, (PAI) exerted a strong positive effect on both (PDP) ($\beta = 0.61, p < .001$) and (PPF) ($\beta = 0.54, p < .001$). Both PDP ($\beta = 0.39, p < .01$) and PPF ($\beta = 0.33, p < .01$) significantly influenced (CI). In turn, CI had a positive and significant effect on (SRC) ($\beta = 0.46, p < .001$).

The mediation analysis further confirmed that PDP and PPF mediated the association between PAI and CI, whereas moderation tests showed significant interaction impacts of Digitalization Level, Firm Size, and Professional Role.



Structure Model with Significant Paths

4.6 Group Comparison of Path Coefficients

To evaluate the moderating role of professional role, a multi-group analysis (MGA) was performed, comparing financial managers ($n = 160$) and external auditors/accountants ($n = 160$). The results showed significant differences in many structural tracks. Particularly, financial managers showed stricter path coefficients from (PAI) to (PDP) and from PAI to (CI) compared to auditors/accountants. This result indicates that managers perceive AI adoption as having a greater impact on compliance-related perceptions and intentions. Table 4.3 and figure 4.3 show the findings of the multi-group analysis comparing financial managers with auditors/accountants.

Table 4.3
Multi-Group Comparison of Path Coefficients

Path	Financial Managers (β)	Auditors/Accountants (β)	β (Difference)	p-value	Result
PAI → PDP	0.62	0.48	.14	0.03	Significant
PAI → PPF	0.55	0.50	.05	0.21	Not Significant
PDP → CI	0.41	0.39	.02	0.42	Not Significant
PPF → CI	0.36	0.28	.08	0.04	Significant
CI → SRC	0.47	0.44	.03	0.38	Not Significant

Note. $\Delta\beta$ = difference in standardized path coefficients between groups.

The tracks PAI → PDP and PPF → CI differed significantly among the two groups, reflecting that financial managers perceive a stronger effect of AI on improving detection perceptions and compliance intentions comparison to auditors and accountants. The residual tracks did not show statistically significant differences suggesting that most associations in the model are perceived similarly throughout professional roles.

Figure 4.3: Group Comparison of Path Coefficients (Managers vs Auditors)

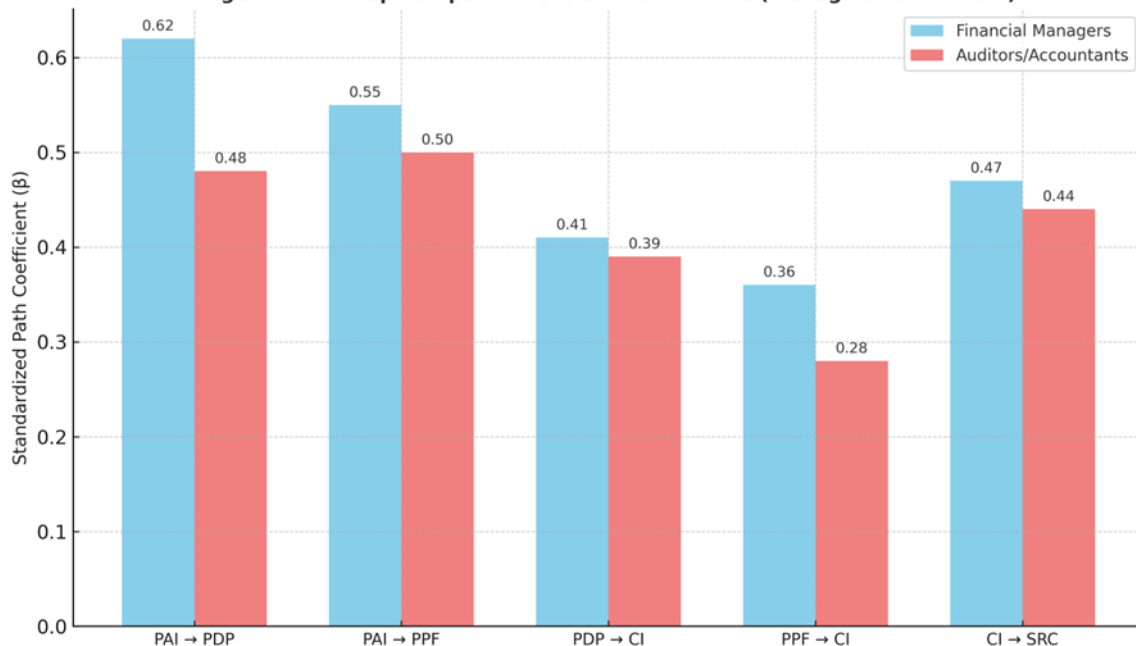


Figure 4.3: Multi-Group Comparison of Path Coefficients

Discussion and Implications

5.1 Introduction

This chapter discusses the results presented in Chapter Four in light of the theoretical framework and previous research. It underscores the implications for theory, practice and policy, as well as the study's limitations and directions for future research.

5.2 Discussion of Key Findings

The findings confirmed that (AI) adoption at the Jordanian (ISTD) positively influenced tax compliance through perceived detection probability and perceived procedural fairness. This results consistent with Deterrence Theory (Allingham & Sandmo, 1972), which suggests that increasing the probability of detection decreases incentives for evasion. Participants stated higher compliance intention when they believed AI tools enhanced audit targeting.

The findings also supported the Theory of Planned Behavior (Ajzen, 1991), as compliance intention was significantly formed through perceived detection probability and fairness. These factors fostered participants' attitudes and perceived behavioral control, causing of larger self-reported compliance. Furthermore, the results confirm Agency Theory by showing that AI decreases information asymmetry among corporates and the tax authority, limiting chances for aggressive tax avoidance.

Moderation results additionally show contextual differences. Corporates with greater digitalization levels perceived AI adoption as more effective, underscoring the complementary effect of digital willingness. Smaller corporates demonstrated stronger compliance impacts compared to larger corporates, probably because of less resources for advanced tax avoidance strategies. Multi-group analysis showed that financial managers were more likely than external auditors to perceive AI as improving compliance, indicating their direct exposure to internal company operations.

5.3 Theoretical Implications

This study participates to tax compliance literature through incorporation deterrence, behavioral and agency viewpoints into a unified context. It expands prior work that depend mainly on financial indicators (Hanlon & Heitzman, 2010) through demonstrating that perception-based measures also offer strong visions into compliance behavior in developing countries. The validated measurement form and survey instrument can be implemented in future studies investigating AI adoption in taxation throughout another frameworks.

5.4 Practical and Policy Implications

For the Jordanian ISTD, the results highlight the significance of continuing to invest in AI-led audit instruments with caution attention to transparency and fairness. Building taxpayer trust needs not just effective detection but also clear communication of procedures and consistent decision-making. Training auditors to explain AI signals and confirming fairness audits of algorithms will foster legitimacy (Abu Huson et al., 2025; Falah Alroud et al., 2025)

For corporates, the findings suggest the essential need to align digitalization strategies with tax compliance demands (Belahouaoui&Attak, 2024; Martinez, 2025; Sharma & Bhatnagar, 2025). Corporates with ERP and e-invoicing systems were preferred position to benefit from AI adoption; in decreasing risk of detection and in sustaining transparent practices. Managers should also foster internal tax governance to decrease potential red flags flagged by AI instruments(Adegbayibi&Ajape, 2025; Bishop, 2021; Decuyper& Van de Vijver, 2025).

5.5 Limitations

Some limitations must be recognized. The cross-sectional design avoids causal relations. Although the sample size was appropriate for SEM, the study concentrated on Jordan which reducing the generalizability to other regions.

5.6 Directions for Future Research

Longitudinal designs could evaluate variations in compliance behavior over time as AI tools become more advanced. In addition, qualitative research as interviews with tax officers and corporate managers could accompaniment quantitative results by offering richer visions into how AI forms perceptions of fairness and compliance.

5.7 Conclusion

This chapter highlighted that AI adoption improves compliance mainly through perceived detection possibility and fairness, validating deterrence, behavioral and agency viewpoints. The results offer actionable visions for policymakers and corporates, while also laying a basic for future research into AI-driven tax administration in developing countries.

Conclusion and Recommendations

6.1 Introduction

This chapter mentions the main conclusions of the study and offers recommendations for policymakers, practitioners and also researchers. It builds on the results and discussion in the prior chapters to present actionable visions for enhancing tax compliance through (AI).

6.2 Key Conclusions

The study concluded that AI adoption in the Jordanian (ISTD) significantly improves firm tax compliance by enhancing detection possibility and fostering perceptions of procedural fairness. Compliance intention was confirmed as a strong predictor of self-reported compliance behavior. Moderating impacts of corporate size, digitalization and professional role show that framework matters in how AI effects compliance. Collectively, these results validate the theoretical incorporation of Deterrence Theory, the Theory of Planned Behavior and Agency Theory in interpreting AI-driven tax compliance.

6.3 Policy Recommendations for ISTD

1. Improve AI incorporation: Continue scaling AI-based audit systems while confirming incorporation with e-invoicing and customs databases.
2. Confirm Transparency: Often publish audit selection criteria and fairness reports to foster taxpayer trust.
3. Auditor Training: Train auditors to explain AI-generated risk signals and confirm decisions are evidence-based.
4. Algorithm Governance: perform audits every three months (quarterly) of AI models discover bias and confirm fairness in tax enforcement.
5. Stakeholder involvement: perform workshops with corporates and auditors to illustrate how AI tools work and decrease mistrust.

6.4 Recommendations for Companies

1. Strengthen Tax Governance: generate strict internal disciplines to control and decrease exposure to AI-detected anomalies.
2. Invest in Digitalization: perform ERP systems and e-invoicing platforms consistent with ISTD's AI systems.

3. Transparency in Reporting: Clearly disclose tax incentives, deductions and adjustments to prevent misinterpretation by AI algorithms.

4. Proactive Risk Management: observe financial ratios that could cause AI red flags and sustain compliance-ready documentation.

6.5 Recommendations for Future Research

Future research should expand to other developing countries and examine longitudinal impacts of AI adoption. Mixed-methods approaches (quantitative and qualitative) could offer an in-depth understanding of perceptions and behavioral changes.

6.6 Final Remarks

In conclusion, AI adoption represents a transformative step for tax administration in Jordan. Throughout improving detection and fairness, AI fosters compliance and decreases opportunities for tax evasion. Nevertheless, achievement depends on continuous investment in technology, fairness in enforcement and cooperation among tax authorities, firms and auditors. This study offers theoretical and practical contributions and covers the way for future research on AI-driven compliance in developing countries.

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