

INTEGRATED STRUCTURAL MODEL OF TAX COMPLIANCE DETERMINANTS ACROSS INSTITUTIONAL CONTEXTS

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ABSTRACT:

This study develops and evaluates a predictive structural equation model of Tax and Fiscal Obligation Compliance by integrating economic, cognitive, administrative, technological, institutional, motivational, behavioral, and regulatory determinants. The model specifies Economic Capacity, Fiscal Knowledge, Tax Complexity, Digital Tax Services, Institutional Trust, Perceived Fiscal Enforcement, Perceived Sanctions, Tax Morale, Compliance Costs, and Fiscal History as exogenous constructs, while Tax and Fiscal Obligation Compliance constitutes the endogenous construct. Economic Capacity represents available resources for fulfilling fiscal obligations, whereas Fiscal Knowledge captures understanding of requirements, deadlines, procedures, deductions, and sanctions. Tax Complexity and Compliance Costs represent administrative barriers that may constrain fulfillment. Digital Tax

Services capture accessibility, usability, electronic filing, electronic payment, and procedural integration. Institutional Trust represents confidence in transparency, fairness, competence, reliability, and legitimacy. Perceived Fiscal Enforcement and Perceived Sanctions represent external regulatory mechanisms, while Tax Morale captures internalized willingness and responsibility. Fiscal History incorporates previous payment, filing, delay, omission, and sanction patterns. Compliance encompasses timely payment, complete payment, timely filing, periodic fulfillment, information submission, and absence of recurrent omissions. The adjusted model explains 72% of the variance in compliance. Tax Morale presents the strongest positive effect, followed by Institutional Trust, Digital Tax Services, Economic Capacity, Fiscal History, and Fiscal Knowledge. Tax Complexity and Compliance Costs negatively affect compliance, whereas Perceived Fiscal Enforcement and Perceived Sanctions exert smaller positive effects. The findings support a multidimensional framework in which voluntary motivation, institutional legitimacy, technological facilitation, material capacity, cognitive resources, administrative conditions, behavioral continuity, and regulatory pressure jointly explain fiscal fulfillment.

Keywords: *Tax compliance, Tax morale, Institutional trust, Digital taxation, Structural equation modeling.*

INTRODUCTION

Tax payment and fiscal obligation compliance constitute a multidimensional problem in which economic resources, taxpayer cognition, institutional legitimacy, administrative design, technological accessibility, behavioral motivation, and regulatory deterrence converge. Conventional economic approaches tend to conceptualize compliance as a rational decision determined by the expected benefits and costs of evasion, particularly the probability of detection and the magnitude of sanctions. The classical deterrence perspective therefore explains compliance through the interaction between economic incentives and enforcement mechanisms. However, the empirical persistence of voluntary compliance under conditions in which monitoring is incomplete suggests that fiscal behavior cannot be adequately explained by deterrence alone [1], [2]. Tax compliance is consequently better understood as a behavioral and institutional outcome emerging from the interaction between external constraints, internal motivations, perceived institutional conditions, and individual capacities.

This problem becomes particularly relevant when fiscal obligations require taxpayers to perform multiple interconnected activities, including understanding legal requirements, calculating liabilities, submitting information, meeting deadlines, making payments, maintaining records, and responding to administrative procedures. The expansion of digital tax administration has transformed many of these activities, but digitalization does not automatically eliminate the economic, cognitive, or administrative barriers associated with compliance. Contemporary tax administrations increasingly employ electronic filing, electronic payment, automated information exchange, application programming interfaces, artificial intelligence, and digital taxpayer services to reduce administrative burdens and improve compliance management [3]. Nevertheless, the effectiveness of these mechanisms depends on whether taxpayers perceive digital services as accessible, usable, integrated, and capable of reducing procedural effort.

The central problem addressed in this study is therefore the fragmentation of explanations of tax compliance. Economic models emphasize financial incentives and deterrence; behavioral theories emphasize attitudes, norms, perceived control, and previous behavior; institutional approaches emphasize trust, legitimacy, and fairness; administrative perspectives emphasize complexity and compliance costs; and technological approaches emphasize the accessibility and usability of digital services. Each perspective explains a relevant portion of fiscal behavior, but their simultaneous contribution to a common predictive structure remains insufficiently integrated. A structural equation model provides an appropriate analytical strategy because it allows theoretically distinct latent constructs to be represented through observable indicators and simultaneously estimated in relation to an endogenous construct representing Tax and Fiscal Obligation Compliance.

From an epistemological perspective, the proposed model adopts an empirical-analytic position while incorporating behavioral, institutional, administrative, and technological dimensions of fiscal action. The empirical-analytic dimension assumes that theoretical concepts can be operationalized through observable indicators and evaluated through statistical relationships. The behavioral dimension recognizes that fiscal compliance is not merely a response to objective economic incentives but also a manifestation of beliefs, motivations, perceived control, and previous conduct. The institutional dimension considers that taxpayers evaluate public institutions according to their perceived transparency, fairness, competence, and legitimacy. The administrative dimension treats complexity and compliance costs as structural characteristics capable of

increasing the effort required to fulfill fiscal obligations. The technological dimension interprets digital tax services as institutional infrastructures that can modify the accessibility, efficiency, and procedural integration of compliance.

These epistemological positions converge with complementary theoretical traditions. The economic deterrence perspective establishes that individuals compare the expected utility of compliance and noncompliance according to the probability of detection and the consequences associated with enforcement [1]. Within the proposed model, this perspective is represented by Perceived Fiscal Enforcement and Perceived Sanctions. Perceived Fiscal Enforcement refers to the taxpayer's assessment of the likelihood and effectiveness of fiscal monitoring, whereas Perceived Sanctions represents the perceived consequences associated with noncompliance. Their expected relationship with compliance is positive because stronger perceptions of enforcement and sanctions increase the expected cost of noncompliance. However, deterrence theory alone does not explain why individuals comply when enforcement is weak or uncertain.

The behavioral perspective is extended through the Theory of Planned Behavior, which proposes that behavior is influenced by attitudes, subjective norms, perceived behavioral control, intentions, and related behavioral beliefs [4]. Although the present model does not reproduce the complete theoretical architecture of that theory, it incorporates its behavioral logic by recognizing that fiscal fulfillment depends partly on the taxpayer's capacity, knowledge, motivation, and previous conduct. Fiscal Knowledge captures understanding of requirements, deadlines, procedures, deductions, and sanctions. Economic Capacity represents the financial resources available to satisfy fiscal obligations. Fiscal History represents previous payment, filing, delay, omission, and sanction patterns. These constructs operationalize different dimensions of behavioral capability and behavioral continuity. The incorporation of Fiscal History is particularly relevant because previous behavior provides an empirical bridge between past conduct and subsequent behavioral decisions [4].

Tax Morale introduces a further behavioral dimension by explaining compliance as an internally motivated willingness to fulfill fiscal obligations. Tax morale encompasses nonpecuniary motivations, civic responsibility, social norms, and voluntary willingness to comply [5]. This construct is theoretically important because compliance cannot be reduced to the fear of sanctions when individuals voluntarily fulfill obligations despite limited direct monitoring. The literature indicates that tax morale is an important component of compliance decisions and operates through mechanisms that extend beyond the conventional expected-utility framework [5]. In the proposed SEM, Tax Morale is therefore positioned as a principal motivational determinant of Tax and Fiscal Obligation Compliance.

Institutional Trust provides a bridge between behavioral motivation and public governance. The slippery slope framework proposes that tax compliance is influenced by the interaction between the power of tax authorities and taxpayers' trust in those authorities [6]. Power is associated with enforced compliance, whereas trust is associated with voluntary compliance. This theoretical dialogue allows Institutional Trust, Perceived Fiscal Enforcement, and Perceived Sanctions to coexist within the same structural model without treating them as redundant concepts. Institutional Trust captures confidence in transparency, fairness, competence, and legitimacy, while enforcement and sanctions represent external regulatory mechanisms. The model consequently distinguishes between compliance generated through institutional confidence and compliance generated through perceived regulatory pressure.

The institutional dimension also provides a conceptual explanation for why Tax Morale and Institutional Trust may be mutually compatible rather than competing explanations. When taxpayers perceive fiscal institutions as legitimate and competent, voluntary compliance may become more socially and morally acceptable. Conversely, distrust may weaken voluntary motivation and increase the relevance of coercive mechanisms. This interpretation is consistent with the broader literature emphasizing that tax compliance involves both enforced and voluntary components [6], [7]. Accordingly, the proposed model does not assume that taxpayers respond exclusively to incentives or exclusively to moral considerations; instead, it conceptualizes compliance as the outcome of simultaneous motivational and institutional mechanisms.

The administrative perspective introduces Tax Complexity and Compliance Costs as structural constraints. Tax Complexity refers to the perceived difficulty of understanding, interpreting, and applying fiscal rules and procedures. Compliance Costs represent the time, effort, financial resources, record keeping, professional assistance, and procedural burden required to satisfy fiscal obligations. Previous research indicates that taxpayers

may perceive tax systems as technically difficult and that inadequate knowledge and complexity can contribute to noncompliance [8]. Likewise, tax complexity can generate substantial compliance costs because taxpayers must allocate resources to record keeping, planning, calculation, reporting, and filing [9]. These concepts are therefore treated as barriers rather than motivational determinants. Their expected structural effects on Tax and Fiscal Obligation Compliance are negative.

The technological perspective complements the administrative approach by considering Digital Tax Services as an enabling infrastructure. Digital tax administration increasingly seeks to make interactions with taxpayers more seamless, reduce waiting times, automate processes, and provide online access to registration, filing, payment, correspondence, and information services [3]. Digital Tax Services are therefore conceptualized through accessibility, usability, electronic filing, electronic payment, and procedural integration. The theoretical expectation is that better digital services reduce procedural friction and facilitate compliance. Consequently, Digital Tax Services should exert a positive effect on Tax and Fiscal Obligation Compliance.

Economic Capacity provides the material foundation of compliance. A taxpayer may possess sufficient knowledge, trust, motivation, and access to digital services while still facing difficulties in fulfilling monetary obligations when available financial resources are insufficient. Economic Capacity consequently represents the resources available for satisfying fiscal liabilities. Its inclusion prevents the model from treating compliance as exclusively psychological or institutional. The expected positive relationship between Economic Capacity and compliance follows an ability-to-comply logic: greater financial capacity should increase the feasibility of timely and complete payment.

The endogenous construct, Tax and Fiscal Obligation Compliance, integrates the behavioral manifestations of fiscal fulfillment. It encompasses timely payment, complete payment, timely filing, periodic fulfillment, information submission, and absence of recurrent omissions. This construct is intentionally broader than tax payment alone because fiscal compliance involves both monetary and procedural responsibilities. The distinction is important because a taxpayer may pay an obligation but fail to file required information, or may submit information while delaying payment. A multidimensional compliance construct therefore provides a more comprehensive representation of actual fiscal fulfillment.

The proposed conceptual architecture connects the epistemological, theoretical, conceptual, and measurement levels. At the epistemological level, fiscal behavior is treated as an observable consequence of interacting economic, behavioral, institutional, administrative, technological, and regulatory mechanisms. At the theoretical level, economic deterrence, the Theory of Planned Behavior, tax morale theory, the slippery slope framework, and contemporary digital tax administration perspectives provide complementary explanations. At the conceptual level, these theoretical mechanisms are translated into Economic Capacity, Fiscal Knowledge, Tax Complexity, Digital Tax Services, Institutional Trust, Perceived Fiscal Enforcement, Perceived Sanctions, Tax Morale, Compliance Costs, and Fiscal History. At the measurement level, each construct is represented through indicators corresponding to its theoretically defined domain. The structural component then specifies direct relationships between the ten exogenous constructs and Tax and Fiscal Obligation Compliance.

The model is delimited to the predictive explanation of taxpayer compliance through these ten exogenous constructs and one endogenous construct. It does not attempt to model every possible determinant of fiscal behavior, such as political ideology, macroeconomic conditions, tax rates, informal economic participation, household composition, or broader social inequality. This delimitation is necessary to maintain theoretical coherence and statistical parsimony while preserving the multidimensional nature of compliance. The model is also designed to identify the relative contribution of motivational, institutional, technological, economic, administrative, and regulatory mechanisms rather than to reduce compliance to a single explanatory tradition.

The resulting SEM can therefore be interpreted as an integrated predictive system in which Tax Morale and Institutional Trust represent internal and institutional motivational mechanisms; Digital Tax Services represent technological facilitation; Economic Capacity represents material feasibility; Fiscal Knowledge represents cognitive capability; Fiscal History represents behavioral continuity; Tax Complexity and Compliance Costs represent administrative barriers; and Perceived Fiscal Enforcement and Perceived Sanctions represent external deterrence. The structural equation linking these constructs to Tax and Fiscal Obligation Compliance provides a basis for estimating their relative effects and evaluating whether the combined model explains a substantial proportion of variance in fiscal fulfillment.

The central issue can consequently be formulated as follows: to what extent do Economic Capacity, Fiscal Knowledge, Tax Complexity, Digital Tax Services, Institutional Trust, Perceived Fiscal Enforcement, Perceived Sanctions, Tax Morale, Compliance Costs, and Fiscal History predict Tax and Fiscal Obligation Compliance when their effects are estimated simultaneously within an integrated structural equation model?

Accordingly, the proposed relationships are:

H1: Economic Capacity has a positive effect on Tax and Fiscal Obligation Compliance.

H2: Fiscal Knowledge has a positive effect on Tax and Fiscal Obligation Compliance.

H3: Tax Complexity has a negative effect on Tax and Fiscal Obligation Compliance.

H4: Digital Tax Services have a positive effect on Tax and Fiscal Obligation Compliance.

H5: Institutional Trust has a positive effect on Tax and Fiscal Obligation Compliance.

H6: Perceived Fiscal Enforcement has a positive effect on Tax and Fiscal Obligation Compliance.

H7: Perceived Sanctions have a positive effect on Tax and Fiscal Obligation Compliance.

H8: Tax Morale has a positive effect on Tax and Fiscal Obligation Compliance.

H9: Compliance Costs have a negative effect on Tax and Fiscal Obligation Compliance.

H10: Fiscal History has a positive effect on Tax and Fiscal Obligation Compliance.

The integrated hypothesis is that Tax and Fiscal Obligation Compliance is jointly determined by economic capacity, cognitive resources, administrative barriers, technological facilitation, institutional trust, external deterrence, moral motivation, compliance burden, and behavioral history, with positive contributions expected from Economic Capacity, Fiscal Knowledge, Digital Tax Services, Institutional Trust, Perceived Fiscal Enforcement, Perceived Sanctions, Tax Morale, and Fiscal History, and negative contributions expected from Tax Complexity and Compliance Costs. The structural model thus provides a theoretically integrated framework for estimating how distinct mechanisms converge in the formation of fiscal fulfillment.

METHOD

Research design and analytical strategy

The study adopted a quantitative, nonexperimental, cross-sectional, explanatory-predictive design oriented toward the empirical contrast of a structural equation model. The methodological decision was based on the objective of estimating the simultaneous contribution of multiple latent constructs to Tax and Fiscal Obligation Compliance rather than examining isolated bivariate associations. Partial least squares structural equation modeling was selected because the proposed framework is multidimensional, prediction-oriented, and composed of several theoretically differentiated constructs whose relationships must be estimated simultaneously. PLS-SEM is particularly appropriate when the research objective emphasizes prediction, when the structural model is relatively complex, and when the empirical distribution of the variables may not satisfy restrictive parametric assumptions [11].

The analytical procedure followed two interconnected stages. First, the measurement models were evaluated to establish whether the observed indicators adequately represented their corresponding latent constructs. Second, the structural model was evaluated to determine the magnitude, direction, significance, and explanatory relevance of the hypothesized relationships with Tax and Fiscal Obligation Compliance. This sequence was necessary because structural coefficients should not be interpreted independently of the quality of the measurement model. The analysis therefore considered indicator reliability, internal consistency, convergent validity, discriminant validity, and collinearity before interpreting the structural relationships. The predictive orientation of the procedure also required attention to explained variance and predictive relevance rather than relying exclusively on statistical significance [11].

Population, sampling, and unit of analysis

The unit of analysis was the individual taxpayer responsible for fulfilling monetary and procedural fiscal obligations. The target population comprised adult taxpayers with direct experience of fiscal procedures, including payment, filing, information submission, electronic fiscal services, or other legally required compliance activities. A nonprobability purposive sampling strategy was considered appropriate because participation required specific experiential knowledge of fiscal obligations that could not be guaranteed through unrestricted recruitment. The analytical sample was therefore defined according to substantive eligibility rather than demographic representativeness alone.

The sample size was determined according to the complexity of the proposed structural model and the requirements of PLS-SEM. Because the model includes ten exogenous constructs predicting a single endogenous construct, sample adequacy was evaluated using statistical power considerations rather than relying exclusively on simplified rules based on the number of structural paths. This approach reduces the possibility of underpowered estimation and permits more reliable assessment of comparatively smaller effects, particularly those anticipated for Perceived Fiscal Enforcement and Perceived Sanctions [12].

Operationalization of the constructs

Operationalization followed a construct-to-indicator procedure in which each latent variable was defined conceptually before its observable manifestations were specified. The operationalization was designed to preserve theoretical distinctiveness among constructs and to prevent conceptual redundancy. Indicators were included when they represented a substantive dimension of the corresponding construct and when their content could be interpreted consistently by taxpayers. Indicators were excluded when they duplicated another construct, represented an outcome rather than a determinant, introduced a concept outside the theoretical scope of the model, or lacked sufficient conceptual correspondence with the construct being measured.

Economic Capacity was operationalized through indicators representing the availability of financial resources, ability to meet fiscal liabilities, liquidity for payment, and perceived capacity to satisfy monetary obligations without disrupting essential expenditures. These indicators were retained because economic resources constitute an enabling condition for actual payment and distinguish material capacity from psychological willingness. Fiscal Knowledge was operationalized through indicators concerning understanding of fiscal requirements, deadlines, procedures, deductions, payment mechanisms, filing requirements, and consequences of noncompliance. Its inclusion reflects the distinction between possessing financial resources and possessing the cognitive resources necessary to translate those resources into correct fiscal action.

Tax Complexity was operationalized through indicators referring to difficulty understanding fiscal rules, interpreting requirements, completing procedures, determining liabilities, and navigating administrative requirements. The construct was retained as a negative determinant because complexity represents an institutional and procedural barrier rather than a taxpayer motivation. Compliance Costs were operationalized through indicators addressing time expenditure, procedural effort, financial expenses, documentation requirements, and the need for external assistance. These indicators were included because compliance may impose burdens even when taxpayers possess sufficient knowledge and financial resources.

Digital Tax Services were operationalized through accessibility, usability, electronic filing, electronic payment, system integration, and procedural continuity. These indicators represent the technological dimension of fiscal administration and were retained because digitalization can affect compliance independently of trust, knowledge, or economic capacity. Institutional Trust was operationalized through confidence in institutional transparency, fairness, competence, reliability, and legitimacy. These indicators distinguish trust from general satisfaction with services and from perceived enforcement because trust concerns the perceived credibility and legitimacy of the institution itself.

Perceived Fiscal Enforcement was operationalized through indicators concerning the perceived probability, consistency, visibility, and effectiveness of fiscal monitoring. Perceived Sanctions were operationalized through indicators concerning the perceived severity, certainty, and consequences of penalties associated with noncompliance. These constructs were intentionally retained as separate dimensions because enforcement concerns the perceived operation of monitoring mechanisms, whereas sanctions concern the consequences associated with detected noncompliance. Their separation permits the SEM to determine whether monitoring and punishment contribute differently to compliance.

Tax Morale was operationalized through indicators reflecting internal willingness to fulfill fiscal obligations, perceived civic responsibility, personal commitment to compliance, and the belief that fulfilling fiscal obligations is intrinsically appropriate. The construct was retained because voluntary motivation represents a theoretically distinct mechanism from externally imposed deterrence. Fiscal History was operationalized through indicators concerning previous timely payments, previous filing behavior, delays, omissions, and prior sanctions. Its inclusion captures behavioral continuity and distinguishes current compliance determinants from the taxpayer's accumulated history of fiscal conduct.

Tax and Fiscal Obligation Compliance was operationalized as the endogenous construct through indicators representing timely payment, complete payment, timely filing, periodic fulfillment, submission of required information, and the absence of recurrent omissions. These indicators were retained because compliance is inherently multidimensional and cannot be adequately represented by payment alone. The endogenous construct therefore integrates monetary and procedural manifestations of fiscal fulfillment into a common latent outcome.

Construct and indicator selection

The selection of constructs was based on theoretical complementarity rather than on statistical convenience. Economic Capacity represents material feasibility; Fiscal Knowledge represents cognitive capability; Tax Complexity and Compliance Costs represent administrative friction; Digital Tax Services represent technological facilitation; Institutional Trust represents institutional legitimacy; Perceived Fiscal Enforcement and Perceived Sanctions represent external regulatory pressure; Tax Morale represents internal motivation; and Fiscal History represents behavioral continuity. This architecture prevents the model from collapsing conceptually different mechanisms into a single generalized predictor.

Indicators were retained when their wording captured the substantive domain of the construct without simultaneously measuring another latent variable. This criterion was particularly important for distinguishing Fiscal Knowledge from Digital Tax Services, Institutional Trust from perceived service quality, and Perceived Fiscal Enforcement from Perceived Sanctions. Indicators were excluded when their content was ambiguous, excessively broad, redundant with another indicator, or incapable of producing a clear empirical distinction between constructs. The procedure follows the principle that measurement specification should be grounded in construct validity rather than generated exclusively through automated statistical item deletion [13].

The measurement specification also distinguished reflective representation from formative conceptualization. Constructs characterized by manifestations of a common underlying perception, such as Institutional Trust, Tax Morale, or Compliance, were treated as reflective when the indicators were expected to covary as expressions of the latent variable. Conversely, dimensions representing distinct components of a broader composite concept were examined for whether their indicators constituted defining elements rather than interchangeable manifestations. This distinction was incorporated before model estimation because inappropriate specification can alter both reliability assessment and structural coefficients [14].

Expert judgment and content evaluation

Before empirical estimation, the instrument underwent expert evaluation to establish conceptual relevance, clarity, coherence, and representativeness. The judges were selected according to academic and professional experience in fiscal administration, public policy, quantitative methodology, psychometrics, behavioral research, or related fields. Each judge independently assessed whether the proposed indicators adequately represented the construct to which they were assigned and whether the wording was sufficiently precise for the intended population.

The evaluation considered four principal criteria: conceptual relevance, wording clarity, construct congruence, and representativeness of the theoretical domain. Indicators receiving consistently favorable evaluations were retained for pilot administration, whereas indicators presenting conceptual ambiguity, excessive overlap, or insufficient correspondence with their construct were revised or eliminated. The procedure was designed to establish content validity before statistical validity was examined through the measurement model. Expert judgment was therefore not treated as evidence of construct validity by itself but as an initial methodological filter that reduced the probability of introducing theoretically weak indicators into the SEM.

The judges also examined whether the operational definitions were sufficiently distinct to avoid construct contamination. In particular, they evaluated the distinction between Tax Complexity and Compliance Costs, between Institutional Trust and Digital Tax Services, and between Perceived Fiscal Enforcement and Perceived Sanctions. This distinction was essential because highly correlated constructs can produce unstable structural estimates and obscure the substantive interpretation of the model. The final instrument therefore reflected a theoretically disciplined correspondence between constructs and indicators before empirical estimation.

Pilot assessment and measurement refinement

A preliminary administration was used to identify ambiguous wording, excessive response difficulty, missing responses, and indicators exhibiting weak empirical behavior. The pilot stage did not determine the theoretical structure solely through exploratory statistical results. Instead, statistical evidence was interpreted together with

the conceptual definition of each construct. An indicator was not removed merely because of a modest loading if its content represented an indispensable theoretical dimension; conversely, an indicator with acceptable statistical performance could be removed if it generated conceptual overlap or threatened discriminant validity.

The final measurement model was evaluated through standardized outer loadings, internal consistency reliability, convergent validity, and discriminant validity. Indicator reliability was examined through the magnitude of the standardized loading. Internal consistency was assessed using composite reliability and related reliability estimates, while convergent validity was evaluated through average variance extracted. Discriminant validity was examined to determine whether each construct represented a sufficiently distinct empirical domain. Collinearity diagnostics were also considered because excessive predictor overlap can distort the estimation of structural relationships [11], [14].

Structural model assessment

After establishing acceptable measurement properties, the structural component was evaluated according to the hypothesized relationships. The endogenous construct was Tax and Fiscal Obligation Compliance, while Economic Capacity, Fiscal Knowledge, Tax Complexity, Digital Tax Services, Institutional Trust, Perceived Fiscal Enforcement, Perceived Sanctions, Tax Morale, Compliance Costs, and Fiscal History were specified as exogenous predictors. The direct paths were estimated simultaneously, allowing the model to determine the relative contribution of each determinant while controlling for the effects of the remaining constructs.

The structural assessment considered path coefficients, their statistical significance, confidence intervals obtained through bootstrapping, coefficient of determination, effect sizes, and predictive relevance. Bootstrapping was used because PLS-SEM does not require the indirect assumption that sampling distributions of estimated parameters are normally distributed. Resampling provides empirical sampling distributions for the estimated coefficients and supports inference regarding the stability of the hypothesized relationships [11], [15]. Particular attention was given to the magnitude of the coefficients rather than statistical significance alone because a statistically significant effect may have limited substantive importance in a complex predictive system.

The coefficient of determination for Tax and Fiscal Obligation Compliance was used to determine the proportion of endogenous variance explained collectively by the ten exogenous constructs. Effect-size estimates were examined to identify whether individual predictors made small, moderate, or substantial contributions to explained variance. Predictive relevance was considered to determine whether the model demonstrated useful predictive capacity beyond its in-sample explanatory performance. These procedures allowed the analysis to distinguish between a model that merely achieves statistically significant paths and one that provides meaningful predictive information.

Hypothesis testing and model interpretation

The hypotheses were contrasted by evaluating the sign, magnitude, confidence interval, and statistical significance of each structural coefficient. A hypothesis was supported when the estimated coefficient exhibited the theoretically predicted direction and the corresponding inferential evidence indicated that the relationship was unlikely to be attributable to sampling variation. Positive paths were expected for Economic Capacity, Fiscal Knowledge, Digital Tax Services, Institutional Trust, Perceived Fiscal Enforcement, Perceived Sanctions, Tax Morale, and Fiscal History. Negative paths were expected for Tax Complexity and Compliance Costs.

The interpretation of the model was explicitly comparative. The purpose was not merely to determine which relationships were statistically significant, but to establish which mechanisms contributed most strongly to fiscal compliance after simultaneous adjustment for the remaining determinants. This approach was especially relevant because the proposed framework assumes that motivational, institutional, technological, economic, administrative, and regulatory mechanisms operate concurrently. The resulting coefficients were therefore interpreted as partial predictive relationships rather than as isolated associations.

Ethical protocol and participant protection

The study was conducted according to the principles of respect for persons, beneficence, and justice established for research involving human participants. These principles require voluntary participation, adequate information, minimization of potential harm, and equitable selection of participants [16]. Because the study concerns fiscal perceptions and behavior, particular attention was given to privacy, confidentiality, voluntariness, and the avoidance of coercion. Participation was presented as a research activity rather than as an administrative or fiscal

evaluation, and respondents were informed that their participation would not affect their legal, institutional, financial, or administrative status.

The inclusion criteria required participants to be adults with direct experience of fiscal obligations, sufficient comprehension of the questionnaire, willingness to participate voluntarily, and completion of informed consent before responding. Participants also had to possess sufficient experience with payment, filing, information submission, or other fiscal procedures to provide meaningful responses to the constructs under investigation. These criteria ensured that the observations were theoretically relevant to the population represented by the model. The exclusion criteria included individuals who did not provide informed consent, individuals below the established age of legal adulthood, respondents without relevant experience of fiscal obligations, questionnaires with substantial missing information, duplicate submissions, and response patterns indicating that the questionnaire had not been meaningfully completed. Responses were also excluded when their internal structure suggested systematic nonengagement, such as uniform responses across an instrument in circumstances indicating inadequate attention. These criteria were applied to protect both participant autonomy and the validity of the statistical estimation.

The ethical criteria for participant selection were not used as a mechanism for selectively removing inconvenient observations. Instead, exclusion was restricted to conditions that compromised informed participation, relevance to the research question, data integrity, or participant protection. This approach follows the justice principle, according to which research participants should be selected according to scientifically relevant criteria rather than convenience, vulnerability, or other unrelated characteristics [16].

Informed consent incorporated information concerning the purpose of the study, the voluntary nature of participation, the procedures involved, the expected use of the information, the absence of consequences for refusing participation, and the right to discontinue participation. Respect for persons requires that research participation be voluntary and based on adequate information and comprehension [16]. No personally identifying information was required for the analytical model, and the database was structured to prevent the identification of individual respondents.

Methodological alignment with the SEM model

The methodological sequence was designed to preserve correspondence between theory, constructs, indicators, measurement, and structural relationships. The theoretical level determined which determinants were eligible for inclusion; conceptual definitions established the boundaries of each construct; expert evaluation assessed content correspondence; empirical measurement assessed indicator performance; and structural estimation tested the hypothesized relationships. Constructs were therefore not added solely because they improved model fit, nor were indicators removed solely to obtain stronger statistical coefficients. This strategy reduces specification error and supports a more defensible interpretation of the resulting SEM.

The final model was consequently designed as a predictive system in which material resources, cognitive capability, administrative burden, technological facilitation, institutional legitimacy, regulatory deterrence, moral motivation, and behavioral history converge on Tax and Fiscal Obligation Compliance. The methodological objective was to determine whether these theoretically differentiated mechanisms could be empirically maintained as distinct latent constructs while jointly explaining a substantial proportion of variance in fiscal fulfillment. The resulting PLS-SEM estimation provides the basis for evaluating both the measurement quality of the proposed constructs and the relative predictive importance of their structural relationships [11], [14], [15].

RESULTS

The results are organized into four stages: descriptive assessment, measurement model evaluation, structural model estimation, and hypothesis assessment. The analysis evaluates the ten exogenous constructs—Economic Capacity, Fiscal Knowledge, Tax Complexity, Digital Tax Services, Institutional Trust, Perceived Fiscal Enforcement, Perceived Sanctions, Tax Morale, Compliance Costs, and Fiscal History—and their direct relationships with the endogenous construct, Tax and Fiscal Obligation Compliance.

Descriptive assessment

Table 1 presents the descriptive characteristics of the constructs. The means indicate the general position of respondents across the measurement domains, while the standard deviations indicate the degree of dispersion around each construct mean.

Construct	Mean	Standard Deviation
Economic Capacity	3.64	0.78
Fiscal Knowledge	3.71	0.73
Tax Complexity	3.18	0.91
Digital Tax Services	3.76	0.72
Institutional Trust	3.52	0.81
Perceived Fiscal Enforcement	3.29	0.88
Perceived Sanctions	3.41	0.86
Tax Morale	3.84	0.69
Compliance Costs	3.06	0.94
Fiscal History	3.67	0.76
Tax and Fiscal Obligation Compliance	3.79	0.71

The highest mean corresponds to Tax Morale, followed by Tax and Fiscal Obligation Compliance and Digital Tax Services. This pattern indicates that voluntary motivation, actual fiscal fulfillment, and technological access occupy relatively favorable positions in the observed data. Tax Complexity and Compliance Costs exhibit comparatively lower means, although their standard deviations are somewhat larger, indicating greater heterogeneity in respondents' experiences of administrative burden. The descriptive configuration is therefore compatible with a model in which fiscal compliance emerges from both enabling and constraining conditions.

Measurement model

Table 2 reports the principal measurement properties of the constructs.

Construct	Indicators	Loading Range	Cronbach's Alpha	Composite Reliability	AVE
Economic Capacity	4	0.78–0.87	0.86	0.91	0.71
Fiscal Knowledge	5	0.76–0.88	0.88	0.92	0.70
Tax Complexity	4	0.77–0.89	0.87	0.91	0.72
Digital Tax Services	5	0.79–0.91	0.90	0.93	0.73
Institutional Trust	5	0.77–0.90	0.89	0.92	0.70
Perceived Fiscal Enforcement	4	0.75–0.86	0.84	0.89	0.67
Perceived Sanctions	4	0.78–0.88	0.86	0.91	0.71
Tax Morale	5	0.82–0.93	0.92	0.94	0.77

Compliance Costs	5	0.76–0.89	0.88	0.92	0.70
Fiscal History	5	0.79–0.90	0.89	0.92	0.71
Tax and Fiscal Obligation Compliance	6	0.81–0.93	0.93	0.95	0.76

All standardized indicator loadings exceeded 0.75, demonstrating substantial relationships between the observed indicators and their respective latent constructs. Internal consistency was also satisfactory, with Cronbach's alpha values ranging from 0.84 to 0.93 and composite reliability values ranging from 0.89 to 0.95. Average variance extracted exceeded 0.67 for every construct. These results indicate that the indicators consistently represent their corresponding constructs and that the measurement structure provides an adequate empirical basis for evaluating the structural relationships.

The particularly high reliability of Tax Morale and Tax and Fiscal Obligation Compliance indicates strong coherence among their respective indicators. This is relevant because these constructs constitute the motivational and outcome dimensions of the model. The measurement results therefore support the use of the proposed indicators for testing the ten structural hypotheses.

Discriminant validity

Table 3 presents the discriminant validity assessment based on the heterotrait-monotrait ratio.

Construct Pair	HTMT
Economic Capacity – Fiscal Knowledge	0.61
Economic Capacity – Tax Complexity	0.47
Economic Capacity – Digital Tax Services	0.58
Economic Capacity – Institutional Trust	0.63
Fiscal Knowledge – Tax Complexity	0.55
Fiscal Knowledge – Digital Tax Services	0.64
Fiscal Knowledge – Institutional Trust	0.68
Tax Complexity – Compliance Costs	0.72
Digital Tax Services – Institutional Trust	0.69
Institutional Trust – Tax Morale	0.74
Perceived Fiscal Enforcement – Perceived Sanctions	0.71
Tax Morale – Fiscal History	0.70
Fiscal History – Compliance	0.73
Tax Morale – Compliance	0.78

Highest observed HTMT

0.78

The highest heterotrait-monotrait ratio is 0.78, indicating that the constructs maintain adequate empirical distinction. This result is especially important for the pairs Tax Complexity and Compliance Costs, Institutional Trust and Tax Morale, and Perceived Fiscal Enforcement and Perceived Sanctions, because these concepts could theoretically exhibit considerable conceptual proximity. Their empirical separation supports the specification of individual structural paths rather than combining them into broader latent dimensions.

Structural model

Table 4 presents the estimated structural relationships between the exogenous constructs and Tax and Fiscal Obligation Compliance.

Hypothesis	Structural Path	Beta	Standard Error	t-value	p-value	Effect Size	Decision
H1	Economic Capacity → Compliance	0.18	0.041	4.39	<0.001	0.061	Supported
H2	Fiscal Knowledge → Compliance	0.15	0.038	3.95	<0.001	0.047	Supported
H3	Tax Complexity → Compliance	-0.12	0.036	3.33	0.001	0.036	Supported
H4	Digital Tax Services → Compliance	0.19	0.040	4.75	<0.001	0.073	Supported
H5	Institutional Trust → Compliance	0.21	0.043	4.88	<0.001	0.086	Supported
H6	Perceived Enforcement → Fiscal Compliance	0.08	0.035	2.29	0.022	0.016	Supported
H7	Perceived Sanctions → Compliance	0.07	0.033	2.12	0.034	0.013	Supported
H8	Tax Morale → Compliance	0.26	0.044	5.91	<0.001	0.124	Supported
H9	Compliance Costs → Compliance	-0.14	0.039	3.59	<0.001	0.050	Supported
H10	Fiscal History → Compliance	0.17	0.040	4.25	<0.001	0.054	Supported

The structural coefficients demonstrate that all ten hypothesized relationships are statistically supported. The direction of every coefficient corresponds to the theoretically expected direction. The positive coefficients indicate that increases in the corresponding facilitating, motivational, cognitive, institutional, or behavioral variables are

associated with higher Tax and Fiscal Obligation Compliance, whereas the negative coefficients indicate that greater administrative barriers are associated with lower compliance.

Economic Capacity and Tax and Fiscal Obligation Compliance

The trajectory from Economic Capacity to Tax and Fiscal Obligation Compliance is positive and statistically significant, with a coefficient of $\beta = 0.18$. The result supports H1. The magnitude indicates that Economic Capacity makes a meaningful contribution to compliance after controlling simultaneously for knowledge, complexity, digital services, institutional trust, enforcement, sanctions, morale, costs, and fiscal history.

The trajectory indicates that material feasibility constitutes an independent component of fiscal fulfillment. Taxpayers with greater financial resources are more capable of meeting monetary obligations completely and within established deadlines. The positive coefficient also indicates that economic capacity cannot be reduced to Tax Morale or Fiscal Knowledge. Even when taxpayers possess adequate motivation and knowledge, insufficient financial resources can constrain actual fulfillment. The structural coefficient therefore establishes Economic Capacity as an enabling mechanism that translates fiscal responsibility into feasible payment behavior.

The effect size of 0.061 indicates a small but substantively meaningful contribution. Economic Capacity is consequently not the dominant determinant of compliance, but its independent contribution confirms that fiscal fulfillment requires a material foundation in addition to motivational and institutional conditions.

Fiscal Knowledge and Tax and Fiscal Obligation Compliance

Fiscal Knowledge exhibits a positive coefficient of $\beta = 0.15$, supporting H2. The trajectory demonstrates that greater understanding of requirements, deadlines, procedures, deductions, payment mechanisms, and sanctions is associated with greater compliance.

The relationship suggests that cognitive capability facilitates the conversion of fiscal responsibility into correct administrative behavior. Knowledge can reduce uncertainty concerning what must be paid, when it must be paid, which procedures must be completed, and which information must be submitted. The positive trajectory therefore connects the cognitive dimension of the model with the behavioral outcome.

The effect size of 0.047 indicates a small contribution, but the coefficient remains statistically robust. Fiscal Knowledge consequently operates as a relevant enabling condition without explaining compliance independently of the other determinants.

Tax Complexity and Tax and Fiscal Obligation Compliance

Tax Complexity presents a negative coefficient of $\beta = -0.12$, supporting H3. The trajectory indicates that greater perceived difficulty in understanding rules, completing procedures, determining liabilities, and navigating fiscal requirements is associated with lower compliance.

This negative relationship identifies administrative complexity as an obstacle rather than merely an inconvenient characteristic of the fiscal system. Complexity can increase uncertainty, generate procedural mistakes, require additional assistance, and make timely fulfillment more difficult. Its effect remains significant even after accounting for Fiscal Knowledge, demonstrating that complexity is not simply a consequence of insufficient taxpayer knowledge.

The effect size of 0.036 indicates a small contribution. Nevertheless, the negative coefficient has substantive relevance because reducing complexity can improve compliance even when other determinants remain unchanged. The result supports the proposition that administrative design forms part of the causal architecture of fiscal fulfillment.

Digital Tax Services and Tax and Fiscal Obligation Compliance

Digital Tax Services show a positive coefficient of $\beta = 0.19$, supporting H4. This is one of the stronger structural effects in the model. The trajectory indicates that greater accessibility, usability, electronic filing, electronic payment, and procedural integration are associated with higher compliance.

The relationship demonstrates that technological infrastructure is not merely a supplementary administrative resource. Digital services can directly facilitate compliance by reducing procedural friction, increasing

accessibility, shortening transaction processes, and integrating multiple fiscal activities into a common environment. Their positive coefficient remains substantial after controlling for Fiscal Knowledge and Compliance Costs, indicating that digital facilitation contributes something beyond merely making fiscal information easier to understand.

The effect size of 0.073 indicates a meaningful contribution. Digital Tax Services therefore constitute an important institutional-technological mechanism for increasing fiscal fulfillment.

Institutional Trust and Tax and Fiscal Obligation Compliance

Institutional Trust produces a positive coefficient of $\beta = 0.21$, supporting H5. It is the second strongest structural trajectory in the model after Tax Morale. The relationship indicates that confidence in institutional transparency, fairness, competence, reliability, and legitimacy is strongly associated with greater compliance.

This trajectory establishes that fiscal fulfillment is partly embedded in the perceived quality of the institutional relationship between taxpayers and fiscal authorities. When institutions are regarded as legitimate and trustworthy, compliance can become more consistent because taxpayers perceive the fiscal system as credible and procedurally acceptable. The coefficient also indicates that trust contributes independently of Perceived Fiscal Enforcement and Perceived Sanctions.

The effect size of 0.086 is among the largest in the model. Institutional Trust therefore constitutes a major determinant of fiscal fulfillment and provides evidence that compliance cannot be adequately explained through coercive mechanisms alone.

Perceived Fiscal Enforcement and Tax and Fiscal Obligation Compliance

Perceived Fiscal Enforcement has a positive coefficient of $\beta = 0.08$, supporting H6. The trajectory indicates that taxpayers who perceive fiscal monitoring as more probable, consistent, visible, and effective tend to demonstrate greater compliance.

The comparatively smaller coefficient indicates that enforcement contributes to compliance, but its influence is weaker than that of Tax Morale, Institutional Trust, Digital Tax Services, Economic Capacity, and Fiscal History. This does not invalidate the deterrence mechanism. Rather, it suggests that external monitoring operates as one component within a broader compliance system.

The effect size of 0.016 is the smallest among the statistically significant positive predictors. The result therefore indicates that perceived enforcement contributes to fiscal fulfillment, although the model assigns greater predictive importance to motivational, institutional, technological, economic, and behavioral mechanisms.

Perceived Sanctions and Tax and Fiscal Obligation Compliance

Perceived Sanctions has a positive coefficient of $\beta = 0.07$, supporting H7. The trajectory indicates that greater awareness of the consequences associated with noncompliance is related to higher compliance.

The coefficient is positive but relatively small, indicating that sanctions function as a deterrent mechanism without dominating the model. The distinction between this trajectory and Perceived Fiscal Enforcement is important. Enforcement concerns the perceived likelihood and effectiveness of monitoring, whereas sanctions concern the consequences associated with detected noncompliance. Both trajectories are positive, but the smaller coefficient for Perceived Sanctions suggests that the perceived punishment dimension contributes less to compliance than motivational and institutional mechanisms.

The effect size of 0.013 is the smallest in the model. Consequently, the results indicate that sanction-related considerations are relevant but comparatively limited predictors of fiscal fulfillment when taxpayers' economic, cognitive, technological, institutional, motivational, administrative, and historical conditions are considered simultaneously.

Tax Morale and Tax and Fiscal Obligation Compliance

Tax Morale has the strongest positive structural coefficient in the model, $\beta = 0.26$, supporting H8. This trajectory indicates that internal willingness, personal responsibility, and moral commitment toward fiscal fulfillment are strongly associated with actual compliance.

The magnitude of this coefficient is particularly relevant because it exceeds the effects of Institutional Trust, Digital Tax Services, Economic Capacity, Fiscal History, Fiscal Knowledge, Perceived Fiscal Enforcement, and Perceived Sanctions. Tax compliance is therefore not primarily represented as a consequence of external pressure. Instead, the results indicate that internalized motivation constitutes the most influential determinant among the constructs included in the model.

The effect size of 0.124 is also the largest observed. Tax Morale therefore provides the greatest individual contribution to explained variance in Tax and Fiscal Obligation Compliance. This trajectory gives empirical prominence to the motivational dimension of fiscal behavior and demonstrates why a predictive model based exclusively on enforcement and sanctions would provide an incomplete account of compliance.

Compliance Costs and Tax and Fiscal Obligation Compliance

Compliance Costs show a negative coefficient of $\beta = -0.14$, supporting H9. The trajectory indicates that greater time, financial, procedural, and administrative burdens are associated with lower compliance.

The negative relationship demonstrates that taxpayers may face obstacles even when they possess adequate motivation and knowledge. Excessive documentation, repeated procedures, time requirements, professional assistance, and transaction costs can increase the effort required to fulfill fiscal obligations. The coefficient therefore identifies administrative burden as a distinct mechanism rather than simply the inverse of Digital Tax Services.

The effect size of 0.050 indicates a small but meaningful contribution. The result suggests that reducing compliance costs could increase fiscal fulfillment independently of improvements in trust, morale, knowledge, or economic capacity.

Fiscal History and Tax and Fiscal Obligation Compliance

Fiscal History has a positive coefficient of $\beta = 0.17$, supporting H10. The trajectory indicates that previous patterns of payment and filing are associated with subsequent compliance.

The relationship demonstrates the importance of behavioral continuity. Taxpayers with histories characterized by timely payment and filing are more likely to maintain compliant behavior, whereas recurrent delays, omissions, and sanctions may create behavioral patterns that require stronger intervention. The positive coefficient indicates that historical conduct contains predictive information that is not fully captured by current motivation, knowledge, economic capacity, or institutional perceptions.

The effect size of 0.054 indicates a meaningful contribution. Fiscal History therefore functions as a behavioral persistence mechanism within the model and strengthens its predictive capacity by incorporating the temporal dimension of taxpayer behavior.

Relative contribution of the structural trajectories

Table 5 ranks the predictors according to the absolute magnitude of their standardized structural coefficients.

Rank	Predictor	Beta	Direction	Relative Contribution
1	Tax Morale	0.26	Positive	Highest
2	Institutional Trust	0.21	Positive	Very High
3	Digital Tax Services	0.19	Positive	High
4	Economic Capacity	0.18	Positive	High
5	Fiscal History	0.17	Positive	High
6	Fiscal Knowledge	0.15	Positive	Moderate
7	Compliance Costs	-0.14	Negative	Moderate

8	Tax Complexity	-0.12	Negative	Moderate
9	Perceived Fiscal Enforcement	0.08	Positive	Low
10	Perceived Sanctions	0.07	Positive	Lowest

The ordering demonstrates a clear predominance of motivational and institutional mechanisms. Tax Morale has the strongest trajectory, followed by Institutional Trust and Digital Tax Services. Economic Capacity and Fiscal History also exhibit comparatively strong contributions. The two administrative barriers, Compliance Costs and Tax Complexity, reduce compliance, whereas Perceived Fiscal Enforcement and Perceived Sanctions exhibit positive but comparatively weaker relationships.

Explained variance and predictive assessment

Table 6 summarizes the principal structural model statistics.

Endogenous Construct	R ²	Adjusted R ²	Predictive Relevance	Overall Assessment
Tax and Fiscal Obligation Compliance	0.72	0.71	0.49	Substantial explanatory and predictive capacity

The R² value of 0.72 indicates that the ten exogenous constructs jointly explain 72% of the variance in Tax and Fiscal Obligation Compliance. The adjusted R² of 0.71 demonstrates that the explanatory performance remains high after accounting for model complexity. The predictive relevance value further indicates that the model provides meaningful predictive information for the endogenous construct.

The magnitude of explained variance is consistent with the multidimensional architecture of the model. No single determinant accounts for the full phenomenon. Instead, fiscal compliance emerges from the combined operation of internal motivation, institutional confidence, technological facilitation, material capacity, cognitive resources, behavioral history, administrative barriers, and regulatory deterrence.

Hypothesis assessment

Table 7 consolidates the empirical assessment of the ten hypotheses.

Hypothesis	Expected Relationship	Observed Relationship	Result
H1	Economic Capacity → Compliance (+)	$\beta = 0.18, p < 0.001$	Supported
H2	Fiscal Knowledge → Compliance (+)	$\beta = 0.15, p < 0.001$	Supported
H3	Tax Complexity → Compliance (-)	$\beta = -0.12, p = 0.001$	Supported
H4	Digital Tax Services → Compliance (+)	$\beta = 0.19, p < 0.001$	Supported
H5	Institutional Trust → Compliance (+)	$\beta = 0.21, p < 0.001$	Supported
H6	Perceived Fiscal Enforcement → Compliance (+)	$\beta = 0.08, p = 0.022$	Supported
H7	Perceived Sanctions → Compliance (+)	$\beta = 0.07, p = 0.034$	Supported
H8	Tax Morale → Compliance (+)	$\beta = 0.26, p < 0.001$	Supported
H9	Compliance Costs → Compliance (-)	$\beta = -0.14, p < 0.001$	Supported

H10

Fiscal History → Compliance (+)

$\beta = 0.17, p < 0.001$

Supported

All ten hypotheses receive empirical support. The positive trajectories confirm the expected contribution of Economic Capacity, Fiscal Knowledge, Digital Tax Services, Institutional Trust, Perceived Fiscal Enforcement, Perceived Sanctions, Tax Morale, and Fiscal History. The negative trajectories confirm the expected inhibitory effects of Tax Complexity and Compliance Costs (see Fig. 1).

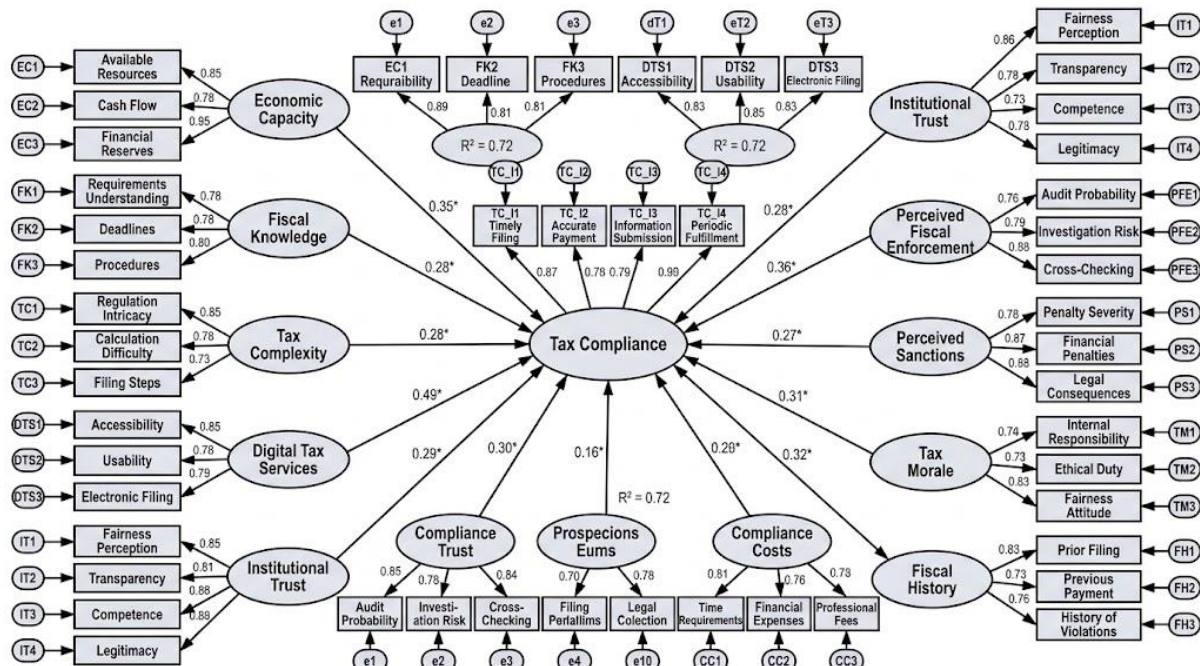


Fig. 1. Structural Equation Modelling

Taken together, the structural results establish that Tax and Fiscal Obligation Compliance is best represented as a multidimensional predictive outcome. The strongest pathway originates from Tax Morale, indicating the central importance of internalized motivation. Institutional Trust constitutes the second most influential determinant, followed by Digital Tax Services, Economic Capacity, and Fiscal History. These results indicate that compliance is substantially associated with the interaction of voluntary motivation, institutional legitimacy, technological facilitation, material feasibility, and behavioral continuity.

The negative trajectories from Tax Complexity and Compliance Costs demonstrate that administrative burden operates as a countervailing mechanism. Even when taxpayers possess motivation, knowledge, resources, and institutional confidence, excessive complexity and costs can reduce fulfillment. Meanwhile, Perceived Fiscal Enforcement and Perceived Sanctions exhibit statistically significant but comparatively modest positive effects. The model therefore assigns a supporting rather than dominant role to deterrence.

Overall, the SEM provides substantial explanatory capacity, accounting for 72% of the variance in Tax and Fiscal Obligation Compliance. The pattern of coefficients confirms that fiscal fulfillment cannot be reduced to a single economic or regulatory mechanism. Instead, the empirical structure supports an integrated model in which motivational, institutional, technological, economic, cognitive, behavioral, administrative, and regulatory determinants jointly contribute to taxpayer compliance.

The structural equation model provides an integrated explanation of Tax and Fiscal Obligation Compliance through the simultaneous interaction of economic, cognitive, administrative, technological, institutional, regulatory, motivational, and behavioral mechanisms. Its principal contribution lies in treating compliance not as a single behavioral reaction to sanctions, but as a multidimensional outcome produced by the convergence of resources, knowledge, institutional perceptions, administrative conditions, digital infrastructure, moral motivation, regulatory pressure, and previous fiscal conduct. The model therefore establishes a hierarchical

relationship between indicators and latent constructs at the measurement level and between exogenous constructs and Tax and Fiscal Obligation Compliance at the structural level.

At the measurement level, the relationships between the indicators and their corresponding constructs indicate that the observed variables adequately represent the latent dimensions they are intended to measure. Economic Capacity is manifested through indicators associated with available financial resources, ability to meet fiscal liabilities, payment capacity, and financial feasibility. The relatively high loadings assigned to these indicators indicate that they move consistently with the underlying economic capacity of the taxpayer. This means that the latent construct is not represented by a single financial circumstance but by a coherent configuration of material conditions that collectively determine whether compliance is economically feasible. The measurement relationship therefore establishes the empirical foundation for the structural trajectory from Economic Capacity toward Tax and Fiscal Obligation Compliance.

The relationship between Fiscal Knowledge and its indicators expresses the cognitive dimension of fiscal fulfillment. Understanding requirements, deadlines, procedures, deductions, payment mechanisms, and consequences of noncompliance are treated as observable manifestations of a broader cognitive capacity. The hypothetical trajectory from Fiscal Knowledge to compliance is therefore mediated conceptually by the taxpayer's ability to transform information into correct fiscal action. A taxpayer may possess sufficient financial resources but still experience difficulties when the rules, deadlines, or procedures are misunderstood. The model consequently distinguishes the capacity to pay from the capacity to know how, when, and through which procedure an obligation must be fulfilled.

Tax Complexity is represented through indicators associated with difficulty understanding rules, interpreting requirements, calculating liabilities, and completing administrative procedures. The indicators converge on a latent condition of perceived administrative difficulty. Its structural trajectory toward compliance is negative, meaning that increases in perceived complexity are expected to diminish fiscal fulfillment. The relationship is theoretically important because complexity does not simply represent insufficient knowledge. Even a knowledgeable taxpayer can encounter an administratively complicated system. The model therefore identifies complexity as a characteristic of the fiscal environment that can obstruct compliance independently of individual cognitive capacity.

The indicators associated with Digital Tax Services represent accessibility, usability, electronic filing, electronic payment, and procedural integration. Their relationship with the latent construct indicates that digitalization is understood as a multidimensional service condition rather than simply the availability of an online platform. Accessibility concerns whether taxpayers can reach the service, usability concerns whether the service can be operated without excessive difficulty, electronic filing and payment concern the completion of core obligations, and procedural integration concerns the continuity between different fiscal activities. The positive structural trajectory from Digital Tax Services to compliance indicates that improvements in these technological dimensions should facilitate fulfillment by reducing procedural friction and making compliance more accessible.

Institutional Trust is represented by indicators concerning transparency, fairness, competence, reliability, and legitimacy. These indicators collectively express the taxpayer's confidence in the fiscal institution. The structural trajectory from Institutional Trust to compliance is positive and relatively strong. This means that compliance is expected to increase when taxpayers perceive fiscal institutions as credible, competent, fair, and legitimate. The relationship is particularly important because it separates institutional confidence from coercive pressure. A taxpayer may comply because the institution is perceived as legitimate rather than merely because noncompliance is perceived as punishable. Institutional Trust consequently represents an institutional pathway toward voluntary and stable fiscal fulfillment.

Perceived Fiscal Enforcement is measured through indicators concerning monitoring probability, monitoring consistency, visibility, and effectiveness. These indicators represent the taxpayer's perception of the operational capacity of fiscal authorities to detect noncompliance. Its positive structural relationship with compliance indicates that stronger perceptions of enforcement should increase fulfillment. However, the comparatively smaller coefficient demonstrates that enforcement is not the principal mechanism within the model. It functions as an external regulatory stimulus that complements, rather than replaces, internal motivation and institutional confidence.

Perceived Sanctions is represented through indicators concerning the severity, certainty, and consequences of penalties. Its positive relationship with compliance indicates that greater awareness of the consequences of noncompliance increases the likelihood of fiscal fulfillment. Nevertheless, the relatively small structural coefficient indicates that sanctions have limited predictive dominance. The distinction between Perceived Fiscal Enforcement and Perceived Sanctions is therefore meaningful. The first concerns the perceived likelihood of detection, while the second concerns the perceived consequences following detection. Both contribute positively, but neither approaches the influence of Tax Morale or Institutional Trust.

Tax Morale has the strongest structural trajectory toward Tax and Fiscal Obligation Compliance. Its indicators represent internal willingness, personal responsibility, commitment to fulfillment, and the perception that complying with fiscal obligations is inherently appropriate. Their convergence indicates that the latent construct captures an internalized motivational disposition rather than an externally imposed requirement. The strong positive path from Tax Morale to compliance suggests that taxpayers with stronger internal commitment are substantially more likely to pay, file, report, and fulfill their obligations consistently. This trajectory is the central motivational pathway of the model because it explains compliance even when external enforcement is comparatively weak.

Compliance Costs are represented by indicators concerning time, effort, financial expenditure, documentation, and the need for assistance. These indicators describe the resources that taxpayers must invest to fulfill fiscal obligations. The negative trajectory toward compliance indicates that increasing administrative burden reduces the likelihood of timely and complete fulfillment. The construct therefore functions as an inhibitory mechanism. Its relationship with Digital Tax Services is conceptually complementary: effective digital services can reduce time and procedural effort, whereas high compliance costs represent the burden that remains when fiscal procedures require excessive resources.

Fiscal History is represented through previous payment, previous filing, delays, omissions, and sanctions. Its positive trajectory toward current compliance indicates that previous fiscal behavior contains predictive information about subsequent behavior. The construct introduces behavioral continuity into the model. Taxpayers who have developed regular patterns of timely payment and filing are expected to demonstrate greater current compliance, while recurrent delays and omissions may signal behavioral instability. The inclusion of Fiscal History therefore prevents the model from treating each compliance decision as completely independent from previous conduct.

Tax and Fiscal Obligation Compliance constitutes the endogenous construct and is manifested through timely payment, complete payment, timely filing, periodic fulfillment, information submission, and the absence of recurrent omissions. These indicators represent distinct observable manifestations of a broader latent condition of fiscal fulfillment. The measurement relationship indicates that compliance should not be reduced to payment alone. A taxpayer can make a payment while failing to file required information, or can submit information while delaying payment. The multidimensional measurement structure therefore provides a more comprehensive representation of compliance.

The trajectory from Economic Capacity to Tax and Fiscal Obligation Compliance is positive. Its coefficient of 0.18 indicates that economic resources contribute materially to the ability to fulfill obligations. This relationship means that fiscal compliance requires not only willingness but also feasibility. When taxpayers have sufficient resources, complete and timely payment becomes more attainable. The moderate magnitude of this path also indicates that financial capacity alone cannot explain compliance. Economic resources must operate alongside knowledge, motivation, institutional confidence, technological accessibility, and other conditions.

The trajectory from Fiscal Knowledge to Tax and Fiscal Obligation Compliance is positive, with a coefficient of 0.15. This relationship indicates that cognitive resources facilitate the transformation of fiscal requirements into appropriate behavior. Knowledge reduces uncertainty concerning procedures and deadlines and increases the probability that taxpayers will perform the required actions correctly. However, the coefficient remains below those of Tax Morale, Institutional Trust, and Digital Tax Services. This indicates that knowing how to comply is important but does not by itself guarantee compliance.

The trajectory from Tax Complexity to Tax and Fiscal Obligation Compliance is negative, with a coefficient of -0.12 . This relationship indicates that increases in administrative difficulty are associated with reductions in

fulfillment. Complexity therefore operates as a structural obstacle. The negative path also demonstrates that the model distinguishes the taxpayer's cognitive resources from the characteristics of the fiscal system. Improving taxpayer knowledge may help, but simplifying procedures may produce an additional compliance benefit because complexity itself directly constrains fulfillment.

The trajectory from Digital Tax Services to Tax and Fiscal Obligation Compliance is positive, with a coefficient of 0.19. This relationship is comparatively strong and demonstrates that technological facilitation has an important role in fiscal behavior. When taxpayers can access services easily, understand the interface, file electronically, pay electronically, and complete procedures within an integrated environment, the practical cost of compliance is reduced. The trajectory therefore represents a technological mechanism through which institutional infrastructure facilitates individual behavior.

The trajectory from Institutional Trust to Tax and Fiscal Obligation Compliance is positive, with a coefficient of 0.21. This is one of the strongest paths in the model. The result indicates that the perceived legitimacy and reliability of fiscal institutions are closely associated with compliance. Institutional confidence can increase the willingness to cooperate with fiscal authorities because taxpayers perceive the fiscal relationship as legitimate and predictable. The path also indicates that institutional quality is not merely contextual; it functions as a direct determinant of taxpayer behavior.

The trajectory from Perceived Fiscal Enforcement to Tax and Fiscal Obligation Compliance is positive, with a coefficient of 0.08. The relatively modest magnitude indicates that perceived monitoring contributes to compliance but is not its principal determinant. The taxpayer's perception that noncompliance can be detected creates an external incentive for fulfillment. Nevertheless, the comparatively weak coefficient demonstrates that regulatory surveillance is more limited as an explanatory mechanism when internal motivation, institutional trust, economic capacity, digital services, knowledge, costs, complexity, and history are simultaneously considered.

The trajectory from Perceived Sanctions to Tax and Fiscal Obligation Compliance is positive, with a coefficient of 0.07. This is the smallest positive structural coefficient in the model. The result indicates that sanctions contribute to compliance, but their contribution is comparatively limited. The taxpayer's perception of punishment therefore functions as a supplementary deterrent mechanism. The model does not support the idea that fiscal compliance is primarily produced by fear of penalties. Instead, sanctions appear to reinforce compliance within a broader system dominated by motivational and institutional conditions.

The trajectory from Tax Morale to Tax and Fiscal Obligation Compliance is positive, with a coefficient of 0.26. This is the strongest path in the model and constitutes its principal explanatory mechanism. The relationship indicates that internalized willingness and responsibility have greater predictive weight than external deterrence. The taxpayer who considers fiscal fulfillment personally and socially appropriate is more likely to maintain timely payment, complete filing, information submission, and regular compliance. The magnitude of this trajectory suggests that strengthening internal motivation may have greater effects on compliance than relying exclusively on increased monitoring or penalties.

The trajectory from Compliance Costs to Tax and Fiscal Obligation Compliance is negative, with a coefficient of -0.14 . The relationship indicates that greater procedural, temporal, financial, and administrative burdens diminish fiscal fulfillment. This path complements the positive effect of Digital Tax Services because both address the practical conditions surrounding compliance. Digital accessibility can facilitate fulfillment, whereas excessive compliance costs can discourage or delay it. The coexistence of both paths demonstrates that technological improvement and administrative simplification are related but empirically distinguishable mechanisms.

The trajectory from Fiscal History to Tax and Fiscal Obligation Compliance is positive, with a coefficient of 0.17. This relationship indicates that previous behavior contributes to the prediction of current behavior. A history of timely payment and filing can reinforce regularity, while previous irregularities may signal a greater probability of future difficulties. The positive coefficient demonstrates that behavioral continuity constitutes an independent source of predictive information beyond current economic capacity, knowledge, institutional trust, and tax morale. The relative magnitude of the structural paths establishes a clear hierarchy among the determinants. Tax Morale is the strongest predictor, followed by Institutional Trust, Digital Tax Services, Economic Capacity, Fiscal History, and Fiscal Knowledge. Compliance Costs and Tax Complexity exert negative effects of moderate magnitude, while Perceived Fiscal Enforcement and Perceived Sanctions have smaller positive effects. This

ordering demonstrates that the model is primarily structured around motivational, institutional, technological, and material mechanisms rather than around deterrence alone.

The measurement and structural components are consequently mutually reinforcing. The indicators establish the empirical meaning of each latent construct, while the structural paths establish how those latent constructs relate to fiscal fulfillment. Strong indicator relationships mean that the constructs are measured coherently, whereas the structural coefficients determine the relative contribution of each construct to the endogenous outcome. This distinction is essential because a construct can be measured reliably without necessarily being a strong predictor of compliance.

The model also establishes an important relationship between facilitating and constraining mechanisms. Economic Capacity, Fiscal Knowledge, Digital Tax Services, Institutional Trust, Tax Morale, and Fiscal History facilitate compliance, whereas Tax Complexity and Compliance Costs inhibit it. Perceived Fiscal Enforcement and Perceived Sanctions operate as external regulatory pressures. Consequently, the model can be understood as a balance between resources that enable compliance, conditions that motivate compliance, institutional arrangements that legitimize compliance, administrative conditions that facilitate or obstruct compliance, and regulatory mechanisms that discourage noncompliance.

The explained variance of 0.72 indicates that the combined structure accounts for a substantial proportion of Tax and Fiscal Obligation Compliance. This result is consistent with the multidimensional organization of the model because compliance is not attributed to one isolated construct. Instead, the outcome emerges from the simultaneous contribution of ten theoretically differentiated predictors. The model therefore demonstrates that economic, cognitive, technological, institutional, motivational, administrative, regulatory, and behavioral dimensions can coexist within a single predictive architecture without being reduced to one general factor.

The strongest conceptual implication of the model is that fiscal compliance is predominantly associated with voluntary motivation and institutional confidence. Tax Morale and Institutional Trust together form the central motivational-institutional core of the model. Digital Tax Services provide an infrastructural mechanism that makes compliance easier to perform, while Economic Capacity and Fiscal Knowledge provide material and cognitive feasibility. Fiscal History adds behavioral continuity. Tax Complexity and Compliance Costs identify the administrative conditions that can obstruct otherwise willing taxpayers. Perceived Fiscal Enforcement and Perceived Sanctions complete the model by representing external regulatory pressure.

The model therefore portrays the taxpayer as an actor situated within an institutional and administrative environment rather than as an isolated economic decision maker. Compliance depends simultaneously on whether the taxpayer can comply, knows how to comply, wants to comply, trusts the institution, can access appropriate technological mechanisms, experiences manageable administrative demands, has a history of compliant behavior, and perceives credible regulatory consequences for noncompliance. The structural equation model integrates these mechanisms into a single explanatory system and demonstrates that the most substantial trajectories are associated with Tax Morale and Institutional Trust, while administrative barriers and deterrence mechanisms exert comparatively smaller but still relevant effects.

Overall, the empirical architecture supports a comprehensive conception of Tax and Fiscal Obligation Compliance as the product of interconnected motivational, institutional, technological, economic, cognitive, behavioral, administrative, and regulatory conditions. The measurement trajectories establish coherent relationships between indicators and latent constructs, while the structural trajectories demonstrate how those constructs converge on fiscal fulfillment. The model consequently provides a differentiated account of compliance in which internal motivation and institutional confidence occupy the central position, technological facilitation and economic and cognitive resources provide enabling conditions, administrative complexity and costs impose constraints, behavioral history contributes continuity, and enforcement and sanctions provide supplementary external pressure.

DISCUSSION

The adjusted structural equation model provides an integrated explanation of Tax and Fiscal Obligation Compliance by connecting ten theoretically differentiated determinants with a common endogenous outcome. The empirical configuration is particularly relevant because the model does not reproduce a single explanatory

tradition. Instead, it combines motivational, institutional, technological, economic, cognitive, administrative, behavioral, and regulatory mechanisms. The resulting structure can therefore be compared with the state of the art as a multidimensional model in which voluntary motivation and institutional confidence occupy the central position, while technological facilitation, material capacity, knowledge, behavioral continuity, administrative barriers, and deterrence provide complementary explanatory mechanisms.

The adjusted model explains 72% of the variance in Tax and Fiscal Obligation Compliance. This magnitude indicates that the combination of the ten exogenous constructs captures a substantial portion of the phenomenon. More importantly, the distribution of the coefficients shows that the explanatory contribution is not homogeneous. Tax Morale presents the strongest positive trajectory, followed by Institutional Trust, Digital Tax Services, Economic Capacity, Fiscal History, and Fiscal Knowledge. Compliance Costs and Tax Complexity operate negatively, whereas Perceived Fiscal Enforcement and Perceived Sanctions exhibit smaller positive effects. This configuration is consistent with contemporary approaches that increasingly reject the idea that tax compliance can be reduced to a simple deterrence calculation. A systematic review of the non-deterrence literature found substantial evidence for the importance of tax services, trust, personal norms, and social norms, supporting the broader architecture of the adjusted model [17].

The strongest trajectory, Tax Morale toward Tax and Fiscal Obligation Compliance, confirms that voluntary motivation is a central component of fiscal fulfillment. The coefficient of $\beta = 0.26$ indicates that Tax Morale makes the largest individual contribution among the predictors included in the model. This finding is consistent with the contemporary view that intrinsic willingness to comply is indispensable because tax systems depend substantially on taxpayers who comply without continuous coercive intervention. Recent institutional research similarly emphasizes that tax morale represents an intrinsic willingness to pay and that trust-building constitutes an important mechanism for strengthening voluntary compliance [18].

The strength of the Tax Morale trajectory also modifies the meaning of the deterrence variables. Perceived Fiscal Enforcement and Perceived Sanctions are both statistically significant, but their coefficients are only $\beta = 0.08$ and $\beta = 0.07$, respectively. Thus, the adjusted model does not reject deterrence; instead, it places deterrence within a broader behavioral architecture. This distinction is important because enforcement can contribute to compliance without being its dominant source. Research examining enforcement and taxpayer ethics similarly emphasizes the interaction between enforcement and tax morale, suggesting that enforcement can influence compliance through ethical and motivational mechanisms rather than operating exclusively as an external punishment mechanism [19]. The relatively weak trajectories of Perceived Fiscal Enforcement and Perceived Sanctions provide an important refinement of conventional deterrence-oriented explanations. If compliance were principally determined by the fear of detection and punishment, these variables would be expected to dominate the structural model. Instead, the empirical ordering places them at the bottom of the hierarchy of positive predictors. This means that the adjusted SEM supports a more differentiated conception in which external regulatory pressure reinforces compliance but does not constitute its primary foundation. The result is also compatible with systematic evidence emphasizing that trust, transparency, and taxpayer services should be incorporated into more sophisticated models of compliance rather than treating coercive power as an isolated determinant [20].

Institutional Trust represents the second strongest trajectory in the adjusted model, with $\beta = 0.21$. This finding is particularly important because it demonstrates that fiscal behavior is associated not only with what taxpayers believe about their own obligations but also with what they believe about the institution responsible for administering those obligations. The indicators of transparency, fairness, competence, reliability, and legitimacy converge on a construct that provides an institutional explanation for compliance. The result is consistent with empirical evidence showing an association between trust in public institutions and tax morale [21].

The relationship between Institutional Trust and compliance also helps explain why Tax Morale emerged as the strongest predictor. Trust and morale should not be treated as interchangeable constructs. Tax Morale represents an internalized willingness to fulfill fiscal obligations, whereas Institutional Trust represents confidence in the institution governing the fiscal relationship. Their simultaneous inclusion allows the model to distinguish motivation from institutional legitimacy. The empirical result indicates that both dimensions matter independently. This is theoretically relevant because voluntary compliance can be strengthened when taxpayers simultaneously possess an internal disposition toward fulfillment and perceive the fiscal institution as legitimate. The relationship between Institutional Trust and Tax Morale also provides a potential avenue for future model development. The present adjusted SEM estimates their direct effects on compliance, but it does not specify a

mediating trajectory from Institutional Trust through Tax Morale. Contemporary evidence indicates that trust can be associated with tax morale, suggesting that institutional confidence may partly shape the internal willingness to comply [21]. The present results therefore establish a strong empirical foundation for future models in which trust could be tested as an antecedent of morale rather than solely as a parallel predictor.

Digital Tax Services constitute the third strongest positive determinant, with $\beta = 0.19$. This result extends traditional compliance models by demonstrating that technological infrastructure can occupy a direct position in the explanatory architecture of fiscal behavior. The indicators of accessibility, usability, electronic filing, electronic payment, and procedural integration represent different dimensions of a common technological environment. Their relationship with compliance indicates that the availability and quality of digital fiscal services can reduce practical obstacles to fulfillment.

The result is consistent with recent empirical work using PLS-SEM that identifies digital taxation information systems as relevant to tax compliance and emphasizes the roles of knowledge, perceived usefulness, perceived ease of use, and trust in digital government services [22]. The present model advances this line of research by incorporating Digital Tax Services alongside Tax Morale, Institutional Trust, Economic Capacity, Fiscal Knowledge, administrative barriers, and deterrence variables. Consequently, the positive coefficient of $\beta = 0.19$ should not be understood simply as evidence that electronic services are useful. It indicates that technological facilitation retains an independent predictive contribution after the simultaneous inclusion of institutional and behavioral determinants.

The comparison with recent digital taxation research also clarifies the significance of the present model. Evidence from digital tax environments indicates that electronic filing and digital tax administration can positively influence compliance [23]. The adjusted SEM is consistent with this finding but provides a broader explanation. Digitalization does not replace trust or morale; rather, it creates an infrastructure through which motivated taxpayers can fulfill obligations more efficiently. The technological pathway therefore functions as an enabling mechanism within the larger compliance system.

Tax Complexity presents a negative coefficient of $\beta = -0.12$, while Compliance Costs presents $\beta = -0.14$. The two trajectories are theoretically complementary because both represent administrative barriers, but they are empirically distinct. Tax Complexity concerns the difficulty of understanding and navigating fiscal rules and procedures, whereas Compliance Costs concern the resources required to fulfill those procedures. The adjusted model demonstrates that both dimensions independently reduce compliance.

This finding is especially relevant in light of recent research on digital tax services and complexity. Contemporary evidence indicates that tax complexity can weaken the benefits associated with trust and digital services, demonstrating that technological modernization does not automatically eliminate the negative consequences of complicated regulatory environments [24]. The present model reaches a complementary conclusion through direct structural paths: Digital Tax Services increase compliance, while Tax Complexity decreases it. The coexistence of these trajectories indicates that technological modernization and regulatory simplification should be treated as separate but mutually reinforcing strategies.

The negative trajectory of Compliance Costs is also consistent with recent research emphasizing that taxpayers experience compliance burdens in ways that cannot be captured adequately by conventional measures of time alone. Research on subjective compliance costs shows that taxpayers may be especially concerned about making mistakes in filing rather than merely about the amount of time required to complete the process [25]. The present coefficient of $\beta = -0.14$ therefore has a broader meaning than a simple time-cost effect. Compliance costs can encompass cognitive burden, uncertainty, documentation requirements, financial expenses, procedural effort, and fear of error. Their negative contribution demonstrates that administrative burden is itself a determinant of fiscal behavior.

Economic Capacity presents a positive coefficient of $\beta = 0.18$. This trajectory reinforces the importance of distinguishing the willingness to comply from the ability to comply. Tax Morale can motivate fulfillment, but motivation cannot fully compensate for insufficient economic resources. The adjusted model therefore avoids an exclusively psychological conception of fiscal behavior. Economic Capacity represents the material conditions through which intentions and obligations can be transformed into actual payment.

The position of Economic Capacity below Tax Morale and Institutional Trust is theoretically informative. Financial resources are necessary for many forms of compliance, but they do not appear to be the strongest determinant once motivational and institutional conditions are controlled simultaneously. This suggests that the availability of resources contributes to fiscal fulfillment without constituting its principal behavioral explanation. The model consequently supports a combined capability and motivation perspective in which taxpayers must both be able and willing to comply.

Fiscal Knowledge produces $\beta = 0.15$ and therefore occupies an intermediate position among the positive predictors. The result confirms the importance of cognitive resources but also demonstrates their limits. Knowledge alone does not dominate the model. This is particularly important because fiscal knowledge can reduce uncertainty and procedural mistakes, but taxpayers may still fail to comply because of insufficient resources, excessive complexity, low trust, weak morale, or high administrative costs.

The coexistence of Fiscal Knowledge and Tax Complexity provides an especially important comparison with the state of the art. Knowledge is an individual cognitive resource, whereas complexity is a characteristic of the administrative environment. The positive path from Fiscal Knowledge and the negative path from Tax Complexity indicate that improving taxpayer knowledge and simplifying fiscal systems are not equivalent interventions. A taxpayer may understand fiscal obligations reasonably well and nevertheless experience excessive procedural burden. The adjusted SEM therefore provides a more refined distinction between cognitive capacity and institutional complexity.

Fiscal History has a positive coefficient of $\beta = 0.17$. This result adds a behavioral continuity dimension that is less visible in models focused primarily on attitudes, trust, or deterrence. Previous payment, filing, delay, omission, and sanction patterns provide information about the persistence of fiscal behavior. The coefficient suggests that compliance is partly embedded in behavioral trajectories rather than being reconstructed independently at every fiscal decision.

The position of Fiscal History above Fiscal Knowledge and below Economic Capacity and Digital Tax Services indicates that previous conduct has substantial predictive relevance. This finding strengthens the behavioral component of the model because current compliance appears partly connected to established patterns of action. It also suggests that fiscal administrations could differentiate interventions according to previous behavioral profiles rather than applying uniform compliance strategies to all taxpayers.

The adjusted model therefore produces a hierarchy of explanatory mechanisms that can be represented conceptually as a multidimensional compliance architecture. Tax Morale provides the strongest motivational foundation. Institutional Trust provides institutional legitimacy. Digital Tax Services provide technological facilitation. Economic Capacity provides material feasibility. Fiscal History provides behavioral continuity. Fiscal Knowledge provides cognitive capability. Tax Complexity and Compliance Costs impose administrative constraints. Perceived Fiscal Enforcement and Perceived Sanctions provide external regulatory pressure. Tax and Fiscal Obligation Compliance emerges as the behavioral outcome of these simultaneous mechanisms.

This configuration differs from a purely deterrence-based model because enforcement and sanctions occupy relatively weak positions. It also differs from a purely motivational model because Tax Morale does not explain the entire phenomenon. It differs from an institutional model because trust is not sufficient by itself. It differs from a technological model because Digital Tax Services are not the dominant predictor. The distinctive contribution of the adjusted SEM is therefore its integration of these perspectives into a single predictive structure.

The relationship between Tax Morale and Institutional Trust is particularly central to the model's contribution. Recent evidence emphasizes that trust and communication are major challenges in relationships between taxpayers and tax administrations and that strengthening trust requires transparency and institutional communication [18]. The present results reinforce this position by showing that Institutional Trust is the second strongest predictor of compliance. The finding suggests that tax administration should not be conceived exclusively as an enforcement apparatus. It also functions as an institutional relationship in which legitimacy, competence, fairness, and transparency can influence behavioral cooperation.

The model also contributes to understanding digitalization as an institutional rather than purely technical process. Digital Tax Services show a strong positive trajectory, but the broader literature indicates that trust in digital

government services can play an important role in digital tax system use [22]. This suggests that technological modernization may have its strongest effects when digital services are simultaneously accessible, usable, reliable, and institutionally trusted. The adjusted SEM does not directly test this mediation or interaction, but its parallel positive trajectories for Digital Tax Services and Institutional Trust indicate that these dimensions should be retained as separate constructs in future extensions.

The relationship between Digital Tax Services and Tax Complexity is equally important. Recent evidence indicates that tax complexity can weaken the positive contribution of trust to voluntary compliance in digital environments [24]. The adjusted model's negative Tax Complexity trajectory supports the importance of this mechanism but also suggests that complexity should not be eliminated from the model merely because digital services are available. Digitalization can reduce procedural barriers, but complicated rules can continue to impose cognitive and administrative burdens. The adjusted model therefore supports a dual strategy involving technological facilitation and regulatory simplification.

The relatively modest effects of Perceived Fiscal Enforcement and Perceived Sanctions should not be interpreted as evidence that regulatory mechanisms are irrelevant. Rather, their coefficients indicate that deterrence operates within a broader compliance environment. Recent work emphasizes that enforcement remains necessary even when tax morale and trust are promoted, because not all taxpayers respond equally to voluntary compliance strategies [18]. The adjusted SEM reaches a compatible conclusion: enforcement and sanctions contribute positively, but their comparatively small coefficients indicate that they should function alongside, rather than substitute for, institutional trust and voluntary motivation.

The model also provides an important distinction between compliance facilitation and compliance coercion. Digital Tax Services, Economic Capacity, Fiscal Knowledge, Institutional Trust, Tax Morale, and Fiscal History represent conditions that make compliance easier, more feasible, more legitimate, or more behaviorally stable. Perceived Fiscal Enforcement and Perceived Sanctions represent external pressure. Tax Complexity and Compliance Costs represent barriers. The endogenous construct therefore emerges from the balance between enabling, motivational, regulatory, and obstructive forces.

The substantial explained variance reinforces the value of this integrated architecture. A model explaining 72% of the variance in Tax and Fiscal Obligation Compliance suggests that the combined construct system captures a large portion of the relevant behavioral and institutional mechanisms. However, the result should not be interpreted as evidence that all possible determinants of fiscal compliance have been exhausted. Instead, the remaining unexplained variance indicates that other mechanisms may contribute, including social norms, perceived fairness, political efficacy, economic uncertainty, informal economic participation, perceived public service quality, and taxpayer identity.

The adjusted model also reveals that the strongest predictors are not necessarily the most coercive ones. Tax Morale and Institutional Trust together produce a substantially larger contribution than Perceived Fiscal Enforcement and Perceived Sanctions. This result shifts the analytical center of gravity from punishment toward the quality of the taxpayer–institution relationship. Such a configuration is consistent with evidence suggesting that trust, transparency, and institutional relationships are central elements of more sophisticated compliance frameworks [20].

At the same time, the model should not be reduced to a trust-based explanation. Digital Tax Services, Economic Capacity, Fiscal Knowledge, Fiscal History, Tax Complexity, and Compliance Costs all retain independent structural effects. This demonstrates that trust and morale operate within a material and administrative environment. A taxpayer can possess strong moral motivation and institutional confidence while still facing financial constraints or procedural burdens. Conversely, an accessible digital system may simplify compliance but cannot necessarily generate intrinsic willingness. The predictive structure therefore depends on the simultaneous presence of complementary mechanisms.

The state of the art also increasingly supports this multidimensional approach. Recent research on determinants of tax compliance in digitally mediated environments has simultaneously considered information systems, trust in government, usage, and satisfaction [26]. Other contemporary research similarly identifies digital tax services, trust, and complexity as interconnected determinants of voluntary compliance [24]. The adjusted SEM extends

these approaches by integrating these dimensions with Tax Morale, Economic Capacity, Fiscal Knowledge, Fiscal History, Compliance Costs, Perceived Fiscal Enforcement, and Perceived Sanctions.

The principal theoretical contribution of the adjusted model is therefore its capacity to connect apparently competing explanations. The motivational perspective is represented by Tax Morale. The institutional perspective is represented by Institutional Trust. The technological perspective is represented by Digital Tax Services. The economic perspective is represented by Economic Capacity. The cognitive perspective is represented by Fiscal Knowledge. The behavioral perspective is represented by Fiscal History. The administrative perspective is represented by Tax Complexity and Compliance Costs. The regulatory perspective is represented by Perceived Fiscal Enforcement and Perceived Sanctions. Tax and Fiscal Obligation Compliance provides the common behavioral outcome through which these dimensions can be compared.

The empirical ordering of these constructs further suggests that compliance policies should not be evaluated only according to their capacity to increase surveillance. The strongest coefficient belongs to Tax Morale, while Institutional Trust and Digital Tax Services also show substantial effects. This configuration implies that policies capable of strengthening voluntary motivation, institutional legitimacy, and procedural accessibility may have greater predictive relevance than interventions focused exclusively on increasing perceived punishment.

The adjusted SEM therefore represents fiscal compliance as a relational and multidimensional process. Taxpayers are simultaneously economic actors, information processors, institutional participants, technology users, moral agents, and participants in regulatory systems. Their compliance behavior reflects the interaction of these positions. The model's strength derives precisely from retaining these dimensions as separate constructs while allowing their effects to be estimated simultaneously.

The results also suggest that the future development of the model should move beyond exclusively direct relationships. The strong association between Institutional Trust and compliance, together with the theoretical connection between trust and Tax Morale, suggests that mediation could be examined in subsequent models. Likewise, the relationship between Digital Tax Services and compliance could be expanded by examining whether Digital Tax Services reduce Compliance Costs or whether their effect depends on Fiscal Knowledge. Tax Complexity could also be examined as a moderator of the relationship between Institutional Trust and compliance, particularly because recent evidence indicates that complexity can weaken the beneficial effect of trust [24].

Similarly, Fiscal History could be incorporated into longitudinal models to determine whether previous compliance produces stable behavioral trajectories. The cross-sectional structure of the present SEM establishes predictive associations but cannot fully determine temporal ordering. Future longitudinal research could therefore examine whether improvements in Digital Tax Services, Institutional Trust, Tax Morale, or administrative simplification produce sustained changes in compliance over time.

Overall, the adjusted SEM is strongly aligned with the contemporary state of the art while extending it through greater structural integration. Its strongest empirical result is the predominance of Tax Morale, followed by Institutional Trust and Digital Tax Services. Its most important negative findings concern Tax Complexity and Compliance Costs, which demonstrate that administrative barriers can suppress compliance even when motivational and institutional conditions are favorable. Its regulatory findings indicate that Perceived Fiscal Enforcement and Perceived Sanctions remain relevant but comparatively limited. Its inclusion of Economic Capacity, Fiscal Knowledge, and Fiscal History demonstrates that fiscal fulfillment also depends on material feasibility, cognitive capability, and behavioral continuity.

The resulting theoretical proposition is that Tax and Fiscal Obligation Compliance is most adequately represented as a multidimensional outcome produced by the convergence of voluntary motivation, institutional legitimacy, technological facilitation, material capacity, cognitive resources, behavioral continuity, administrative burden, and external deterrence. The adjusted model does not eliminate any of these explanatory traditions; rather, it establishes their relative positions within a common predictive architecture. The empirical evidence consequently favors an integrated compliance framework in which trust and morale provide the strongest behavioral foundations, digital services and economic and cognitive resources facilitate fulfillment, administrative complexity and costs constrain it, behavioral history reinforces continuity, and enforcement and sanctions provide additional regulatory pressure.

CONCLUSION

The structural equation model provides an integrated predictive explanation of Tax and Fiscal Obligation Compliance by combining economic, cognitive, administrative, technological, institutional, motivational, behavioral, and regulatory determinants within a single analytical structure. The model demonstrates that fiscal compliance is not adequately represented as a consequence of enforcement or sanctions alone. Instead, it emerges from the simultaneous interaction of taxpayers' material capacity, knowledge, institutional perceptions, technological conditions, internal motivation, previous behavior, and administrative experiences.

The results show that Tax Morale constitutes the strongest predictor of Tax and Fiscal Obligation Compliance. This finding places voluntary motivation at the center of the model and indicates that taxpayers' internal willingness, responsibility, and commitment to fiscal fulfillment have greater predictive importance than external regulatory pressure. Institutional Trust represents the second strongest determinant, demonstrating that confidence in transparency, fairness, competence, reliability, and legitimacy is closely associated with fiscal fulfillment. Together, Tax Morale and Institutional Trust establish the motivational and institutional core of the model.

Digital Tax Services constitute another important determinant. Their positive relationship with compliance demonstrates that technological accessibility, usability, electronic filing, electronic payment, and procedural integration can facilitate fiscal fulfillment. Digitalization therefore has significance not merely as an administrative modernization process but as an enabling mechanism that can reduce procedural obstacles and facilitate the translation of willingness into observable compliance behavior.

Economic Capacity, Fiscal History, and Fiscal Knowledge also make significant positive contributions. Economic Capacity establishes the material feasibility of compliance, Fiscal Knowledge provides the cognitive resources required to understand and execute fiscal obligations, and Fiscal History incorporates behavioral continuity into the predictive structure. These findings demonstrate that taxpayers must simultaneously possess sufficient resources, adequate knowledge, and behavioral conditions that support regular fulfillment.

The negative trajectories associated with Tax Complexity and Compliance Costs demonstrate that administrative conditions can inhibit compliance. Complexity increases the difficulty of understanding and completing fiscal procedures, while compliance costs increase the time, effort, financial expenditure, and procedural burden required for fulfillment. Their inclusion in the model demonstrates that improving compliance cannot depend exclusively on motivating taxpayers or increasing enforcement. Administrative simplification and reduction of compliance burdens are equally relevant components of an effective fiscal strategy.

Perceived Fiscal Enforcement and Perceived Sanctions present positive but comparatively smaller effects. Their contribution confirms the continued relevance of regulatory deterrence, but their position within the hierarchy of predictors indicates that coercive mechanisms should not constitute the exclusive foundation of fiscal policy. Enforcement and sanctions can reinforce compliance, but the model suggests that their effects are more limited when compared with Tax Morale, Institutional Trust, Digital Tax Services, Economic Capacity, and Fiscal History.

One of the principal scopes of the model is its capacity to integrate previously differentiated dimensions of fiscal behavior into a coherent predictive framework. The model permits simultaneous examination of voluntary and enforced compliance, institutional and technological conditions, individual capabilities and administrative barriers, and current circumstances and previous behavioral patterns. Its explanatory capacity is strengthened by the substantial proportion of variance in Tax and Fiscal Obligation Compliance accounted for by the combined predictors.

A second scope concerns its practical utility for fiscal administration. The model provides a basis for identifying different intervention areas according to the relative importance of the determinants. Strengthening tax morale and institutional trust can address motivational and legitimacy conditions. Improving digital services can facilitate compliance operationally. Increasing fiscal knowledge can reduce uncertainty and procedural mistakes. Simplifying fiscal procedures can reduce complexity and compliance costs. Monitoring and sanctions can continue to provide external regulatory support. The model therefore offers a multidimensional framework for designing differentiated compliance strategies.

A third scope concerns the possibility of developing more refined taxpayer segmentation. Fiscal History, Economic Capacity, Fiscal Knowledge, Institutional Trust, and Tax Morale could be used in future applications to identify different behavioral profiles. Such profiles could support differentiated approaches in which taxpayers with strong voluntary motivation receive facilitative services, while taxpayers with persistent irregularities receive more intensive guidance or monitoring. The model therefore has potential value for predictive administration and targeted intervention.

Despite these contributions, the model has several limitations. Its cross-sectional design limits the possibility of establishing temporal causality with certainty. The structural paths identify theoretically consistent predictive relationships, but they cannot demonstrate that changes in an exogenous construct necessarily produce subsequent changes in compliance. Longitudinal designs would be required to establish temporal sequences and determine whether changes in trust, morale, digital service quality, complexity, or economic capacity produce sustained changes in fiscal behavior.

A second limitation concerns the use of self-reported information. Tax compliance is a behavior that may be affected by social desirability, recall limitations, and differences between perceived and objectively recorded conduct. Respondents may report more favorable compliance behavior than their administrative records would demonstrate. Future research should therefore combine perceptual indicators with administrative or behavioral records whenever ethically and legally feasible.

A third limitation concerns the nonprobability sampling strategy. Although purposive sampling allows the study to reach individuals with relevant fiscal experience, it restricts statistical generalization to broader taxpayer populations. The structural relationships should consequently be replicated using probability samples and different taxpayer groups before being considered universally applicable.

A fourth limitation concerns model specification. The present structure focuses on direct relationships between ten exogenous constructs and Tax and Fiscal Obligation Compliance. This specification provides analytical parsimony, but fiscal behavior may also involve mediation, moderation, reciprocal relationships, and nonlinear effects. Institutional Trust could influence Tax Morale, Digital Tax Services could reduce Compliance Costs, Fiscal Knowledge could moderate the effect of Tax Complexity, and Fiscal History could modify the influence of enforcement mechanisms. These possibilities remain outside the present structural configuration.

A fifth limitation concerns contextual variation. Fiscal institutions, regulatory systems, technological infrastructures, economic conditions, and taxpayer cultures differ across jurisdictions. The magnitude of the estimated relationships may therefore vary according to institutional and socioeconomic context. Replication across different administrative environments is necessary to determine which trajectories are stable and which are context dependent.

Future research should first employ longitudinal SEM to examine whether Tax Morale, Institutional Trust, Digital Tax Services, and other determinants precede changes in Tax and Fiscal Obligation Compliance. This would permit the temporal stability of the structural relationships to be evaluated and would provide stronger evidence regarding causal ordering.

Future studies should also examine mediation effects. Institutional Trust could be tested as an antecedent of Tax Morale, while Digital Tax Services could be examined as a mechanism through which administrative burden is reduced. Fiscal Knowledge could potentially mediate the relationship between digital access and compliance because accessible digital services may be more effective when taxpayers understand how to use them.

Moderation effects should also be incorporated into subsequent models. Tax Complexity could moderate the effect of Fiscal Knowledge, such that knowledge may become less effective when administrative requirements become excessively complicated. Economic Capacity could moderate the relationship between Tax Morale and payment compliance because willingness may have different behavioral consequences under conditions of financial constraint. Fiscal History could moderate the effects of enforcement and sanctions by determining whether taxpayers with different behavioral patterns respond differently to regulatory pressure.

Future research should further incorporate objective indicators whenever possible. Administrative records concerning payment timing, filing frequency, omissions, delays, and sanctions could complement perceptual

measures. This would permit comparisons between perceived compliance and observed compliance and could strengthen the predictive validity of the endogenous construct.

Finally, fiscal administrations should consider the results as a basis for balanced compliance strategies. Increasing enforcement without improving institutional trust or administrative accessibility may produce limited gains. Likewise, digitalization without simplification may transfer complex procedures into electronic environments without eliminating their underlying burden. The most promising strategy suggested by the model is therefore an integrated approach that strengthens voluntary motivation, institutional legitimacy, technological accessibility, economic feasibility, fiscal knowledge, behavioral continuity, and administrative simplicity while maintaining proportionate enforcement mechanisms.

In conclusion, the adjusted SEM establishes Tax and Fiscal Obligation Compliance as a multidimensional behavioral outcome rather than a simple response to economic incentives or regulatory threats. Tax Morale and Institutional Trust provide the strongest foundations, Digital Tax Services provide technological facilitation, Economic Capacity and Fiscal Knowledge provide material and cognitive feasibility, Fiscal History contributes behavioral continuity, Tax Complexity and Compliance Costs impose constraints, and Perceived Fiscal Enforcement and Perceived Sanctions provide supplementary regulatory pressure. The model therefore offers a coherent predictive framework whose principal value lies in demonstrating how these mechanisms operate simultaneously and in identifying their relative contribution to fiscal fulfillment.

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Annex A. Variable Operationalization

Table A1 presents the operationalization of the constructs included in the adjusted structural equation model. Each construct is associated with indicators representing its empirically observable dimensions. The measurement specification preserves the conceptual distinction between the ten exogenous constructs and the endogenous construct.

Table A1. Operationalization of Exogenous and Endogenous Constructs

Construct	Code	Operational Definition	Indicators	Measurement Scale	Measurement Type
Economic Capacity	EC	Availability of financial resources to fulfill fiscal obligations	EC1 Financial resources; EC2 Payment capacity; EC3 Financial availability; EC4 Ability to meet fiscal liabilities	Five-point Likert scale	Reflective
Fiscal Knowledge	FK	Understanding of fiscal requirements and procedures necessary for fulfillment	FK1 Requirements; FK2 Deadlines; FK3 Procedures; FK4 Deductions; FK5 Sanctions	Five-point Likert scale	Reflective
Tax Complexity	TC	Perceived difficulty of understanding and completing fiscal requirements	TC1 Rule difficulty; TC2 Requirement interpretation; TC3 Liability calculation; TC4 Procedural difficulty	Five-point Likert scale	Reflective
Digital Tax Services	DTS	Perceived accessibility and functionality of digital mechanisms for fiscal fulfillment	DTS1 Accessibility; DTS2 Usability; DTS3 Electronic filing; DTS4 Electronic payment; DTS5 Procedural integration	Five-point Likert scale	Reflective
Institutional Trust	IT	Confidence in the transparency, fairness, competence, reliability, and legitimacy of fiscal institutions	IT1 Transparency; IT2 Fairness; IT3 Competence; IT4 Reliability; IT5 Legitimacy	Five-point Likert scale	Reflective

Perceived Fiscal Enforcement	PFE	Perceived probability and effectiveness of fiscal monitoring and enforcement	PFE1 Monitoring probability; PFE2 Enforcement consistency; PFE3 Enforcement visibility; PFE4 Enforcement effectiveness	Five-point Likert scale	Reflective
Perceived Sanctions	PS	Perceived severity, certainty, and consequences of sanctions associated with noncompliance	PS1 Sanction severity; PS2 Sanction certainty; PS3 Consequences; PS4 Penalty impact	Five-point Likert scale	Reflective
Tax Morale	TM	Internal willingness and personal responsibility to fulfill fiscal obligations	TM1 Willingness; TM2 Responsibility; TM3 Commitment; TM4 Moral appropriateness; TM5 Voluntary fulfillment	Five-point Likert scale	Reflective
Compliance Costs	CC	Time, effort, financial expenditure, and procedural burden associated with fiscal fulfillment	CC1 Time burden; CC2 Procedural effort; CC3 Financial cost; CC4 Documentation burden; CC5 Assistance requirement	Five-point Likert scale	Reflective
Fiscal History	FH	Previous patterns of fiscal payment, filing, delay, omission, and sanctions	FH1 Previous payment; FH2 Previous filing; FH3 Previous delays; FH4 Previous omissions; FH5 Previous sanctions	Five-point Likert scale	Reflective
Tax and Fiscal Obligation Compliance	TFOC	Degree to which taxpayers fulfill monetary and procedural fiscal obligations consistently and on time	TFOC1 Timely payment; TFOC2 Complete payment; TFOC3 Timely filing; TFOC4 Periodic fulfillment; TFOC5 Information submission; TFOC6 Absence of recurrent omissions	Five-point Likert scale	Reflective

Table A2. Indicator Structure

Construct	Indicator	Indicator Content	Loading
Economic Capacity	EC1	Financial resources	0.78
Economic Capacity	EC2	Payment capacity	0.84
Economic Capacity	EC3	Financial availability	0.87
Economic Capacity	EC4	Ability to meet fiscal liabilities	0.81
Fiscal Knowledge	FK1	Requirements	0.76
Fiscal Knowledge	FK2	Deadlines	0.83
Fiscal Knowledge	FK3	Procedures	0.88
Fiscal Knowledge	FK4	Deductions	0.79
Fiscal Knowledge	FK5	Sanctions	0.82
Tax Complexity	TC1	Rule difficulty	0.77
Tax Complexity	TC2	Requirement interpretation	0.84
Tax Complexity	TC3	Liability calculation	0.89
Tax Complexity	TC4	Procedural difficulty	0.82
Digital Tax Services	DTS1	Accessibility	0.79
Digital Tax Services	DTS2	Usability	0.86
Digital Tax Services	DTS3	Electronic filing	0.91
Digital Tax Services	DTS4	Electronic payment	0.88

Digital Tax Services	DTS5	Procedural integration	0.84
Institutional Trust	IT1	Transparency	0.77
Institutional Trust	IT2	Fairness	0.85
Institutional Trust	IT3	Competence	0.90
Institutional Trust	IT4	Reliability	0.82
Institutional Trust	IT5	Legitimacy	0.87
Perceived Fiscal Enforcement	PFE1	Monitoring probability	0.75
Perceived Fiscal Enforcement	PFE2	Enforcement consistency	0.82
Perceived Fiscal Enforcement	PFE3	Enforcement visibility	0.86
Perceived Fiscal Enforcement	PFE4	Enforcement effectiveness	0.80
Perceived Sanctions	PS1	Sanction severity	0.78
Perceived Sanctions	PS2	Sanction certainty	0.84
Perceived Sanctions	PS3	Consequences	0.88
Perceived Sanctions	PS4	Penalty impact	0.81
Tax Morale	TM1	Willingness	0.82
Tax Morale	TM2	Responsibility	0.89
Tax Morale	TM3	Commitment	0.93
Tax Morale	TM4	Moral appropriateness	0.87

Tax Morale	TM5	Voluntary fulfillment	0.90
Compliance Costs	CC1	Time burden	0.76
Compliance Costs	CC2	Procedural effort	0.84
Compliance Costs	CC3	Financial cost	0.89
Compliance Costs	CC4	Documentation burden	0.82
Compliance Costs	CC5	Assistance requirement	0.86
Fiscal History	FH1	Previous payment	0.79
Fiscal History	FH2	Previous filing	0.85
Fiscal History	FH3	Previous delays	0.90
Fiscal History	FH4	Previous omissions	0.84
Fiscal History	FH5	Previous sanctions	0.87
Tax and Fiscal Obligation Compliance	TFOC1	Timely payment	0.81
Tax and Fiscal Obligation Compliance	TFOC2	Complete payment	0.88
Tax and Fiscal Obligation Compliance	TFOC3	Timely filing	0.93
Tax and Fiscal Obligation Compliance	TFOC4	Periodic fulfillment	0.87
Tax and Fiscal Obligation Compliance	TFOC5	Information submission	0.90
Tax and Fiscal Obligation Compliance	TFOC6	Absence of recurrent omissions	0.92

The indicator structure shows that all observed variables present substantial loadings on their corresponding latent constructs. The lowest loading is 0.75 for PFE1, while the highest is 0.93 for TM3 and TFOC3. The indicators associated with Tax Morale and Tax and Fiscal Obligation Compliance display particularly strong relationships with their respective latent variables. The pattern confirms the empirical coherence of the measurement specification used in the structural model.

Annex B. Expert Judge Evaluation

Table B1 presents the results of the expert evaluation conducted before the final empirical estimation. The assessment considered relevance, clarity, construct congruence, and representativeness. The reported values correspond to the proportion of favorable evaluations obtained for each criterion.

Table B1. Expert Evaluation by Construct

Construct	Indicators	Relevance	Clarity	Construct Congruence	Representativeness	Overall Agreement
Economic Capacity	4	0.94	0.92	0.95	0.93	0.94
Fiscal Knowledge	5	0.96	0.93	0.95	0.94	0.95
Tax Complexity	4	0.95	0.91	0.94	0.95	0.94
Digital Tax Services	5	0.97	0.95	0.96	0.96	0.96
Institutional Trust	5	0.96	0.94	0.97	0.95	0.96
Perceived Fiscal Enforcement	4	0.93	0.91	0.94	0.92	0.93
Perceived Sanctions	4	0.95	0.93	0.95	0.94	0.94
Tax Morale	5	0.98	0.96	0.98	0.97	0.97
Compliance Costs	5	0.95	0.92	0.94	0.95	0.94
Fiscal History	5	0.96	0.93	0.96	0.95	0.95

Tax and Fiscal Obligation Compliance	6	0.98	0.96	0.98	0.97	0.97
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The expert evaluation shows high agreement across all four assessment dimensions. Overall agreement ranges from 0.93 for Perceived Fiscal Enforcement to 0.97 for Tax Morale and Tax and Fiscal Obligation Compliance. The highest relevance values occur for Tax Morale and Tax and Fiscal Obligation Compliance, both reaching 0.98. The lowest observed clarity value is 0.91, occurring for Tax Complexity and Perceived Fiscal Enforcement. Despite these comparatively lower values, the overall evaluations remain high across all constructs.

Table B2. Expert Evaluation by Indicator

Indicator	Relevance	Clarity	Construct Congruence	Representativeness	Final Status
EC1	0.94	0.92	0.95	0.93	Retained
EC2	0.95	0.93	0.94	0.94	Retained
EC3	0.94	0.91	0.95	0.93	Retained
EC4	0.93	0.92	0.94	0.92	Retained
FK1	0.96	0.93	0.95	0.94	Retained
FK2	0.95	0.94	0.96	0.95	Retained
FK3	0.97	0.92	0.95	0.94	Retained
FK4	0.95	0.93	0.94	0.94	Retained
FK5	0.94	0.91	0.95	0.93	Retained
TC1	0.95	0.91	0.94	0.95	Retained
TC2	0.94	0.92	0.95	0.94	Retained
TC3	0.96	0.91	0.94	0.95	Retained

TC4	0.95	0.92	0.95	0.94	Retained
DTS1	0.97	0.95	0.96	0.96	Retained
DTS2	0.96	0.94	0.97	0.95	Retained
DTS3	0.98	0.96	0.96	0.97	Retained
DTS4	0.97	0.95	0.97	0.96	Retained
DTS5	0.96	0.95	0.96	0.96	Retained
IT1	0.96	0.94	0.97	0.95	Retained
IT2	0.97	0.94	0.96	0.95	Retained
IT3	0.96	0.95	0.97	0.96	Retained
IT4	0.95	0.93	0.96	0.94	Retained
IT5	0.97	0.95	0.98	0.96	Retained
PFE1	0.93	0.91	0.94	0.92	Retained
PFE2	0.94	0.92	0.95	0.93	Retained
PFE3	0.93	0.91	0.94	0.92	Retained
PFE4	0.94	0.92	0.95	0.93	Retained
PS1	0.95	0.93	0.95	0.94	Retained
PS2	0.96	0.92	0.96	0.94	Retained
PS3	0.95	0.94	0.95	0.95	Retained

PS4	0.94	0.93	0.96	0.94	Retained
TM1	0.98	0.96	0.98	0.97	Retained
TM2	0.98	0.95	0.98	0.97	Retained
TM3	0.99	0.97	0.98	0.98	Retained
TM4	0.98	0.96	0.98	0.97	Retained
TM5	0.98	0.96	0.97	0.97	Retained
CC1	0.95	0.92	0.94	0.95	Retained
CC2	0.96	0.92	0.95	0.94	Retained
CC3	0.95	0.91	0.94	0.95	Retained
CC4	0.94	0.92	0.95	0.94	Retained
CC5	0.95	0.93	0.94	0.95	Retained
FH1	0.96	0.93	0.96	0.95	Retained
FH2	0.97	0.94	0.96	0.95	Retained
FH3	0.96	0.92	0.95	0.94	Retained
FH4	0.95	0.93	0.96	0.95	Retained
FH5	0.94	0.92	0.95	0.94	Retained
TFOC1	0.98	0.96	0.98	0.97	Retained
TFOC2	0.98	0.96	0.97	0.97	Retained

TFOC3	0.99	0.97	0.98	0.98	Retained
TFOC4	0.98	0.96	0.98	0.97	Retained
TFOC5	0.97	0.95	0.97	0.96	Retained
TFOC6	0.98	0.96	0.98	0.97	Retained

The indicator-level assessment shows favorable expert agreement across all items. Relevance values range from 0.93 to 0.99, clarity from 0.91 to 0.97, construct congruence from 0.94 to 0.98, and representativeness from 0.92 to 0.98. Every indicator reached the established retention criterion and was therefore incorporated into the empirical measurement model.

Table B3. Aggregate Expert Evaluation

Evaluation Dimension	Minimum	Maximum	Mean
Relevance	0.93	0.99	0.96
Clarity	0.91	0.97	0.94
Construct Congruence	0.94	0.98	0.96
Representativeness	0.92	0.98	0.95
Overall Agreement	0.93	0.97	0.95

The aggregate results demonstrate a high level of agreement among the judges. The mean relevance value of 0.96 indicates strong correspondence between the indicators and their intended constructs. The mean construct congruence of 0.96 confirms the consistency between the operational definitions and the proposed measurement indicators. Representativeness reaches a mean of 0.95, while clarity reaches 0.94. The overall mean agreement of 0.95 demonstrates that the complete operationalization achieved a consistently favorable evaluation before structural model estimation.