

FOMENTO DEL CUMPLIMIENTO TRIBUTARIO VOLUNTARIO: UN MODELO INTEGRAL BASADO EN TRANSPARENCIA, INCENTIVOS CONDUCTUALES Y SIMPLIFICACIÓN ADMINISTRATIVA

ENCOURAGING VOLUNTARY TAX COMPLIANCE: A COMPREHENSIVE MODEL BASED ON TRANSPARENCY, BEHAVIORAL INCENTIVES AND ADMINISTRATIVE SIMPLIFICATION

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RESUMEN: El objetivo del presente estudio es el de analizar la manera en cómo la transparencia institucional, los incentivos conductuales y la simplificación administración inciden en el cumplimiento tributario voluntario en Ecuador, tomando en cuenta la importancia de los factores mencionados en el fortalecimiento del sistema fiscal. La metodología empleada incluyó un enfoque metodológico mixto, con un diseño no experimental y de alcance correlacional, los datos empleados fueron de tipo cuantitativos y cualitativos que permitió un mejor análisis del problema de investigación. La recolección de la información se realizó mediante la aplicación de encuestas estructuradas que fueron realizadas a los contribuyentes, también fueron dirigidas entrevistas semiestructuradas a expertos fiscales de la provincia de El Oro. Los resultados obtenidos demuestran que, en variables como percepción de la justicia fiscal, la facilidad en los procesos tributarios y la efectividad de las campañas informativas llegan a ejercer influencia de forma positiva, aunque moderada, en la disposición que tienen los contribuyentes a cumplir de forma voluntaria con sus obligaciones tributarias. Se llega a determinar que los contribuyentes valoran de forma positiva la claridad que tiene la normativa, la reducción de trámites que podrían ser innecesarios y la existencia de información accesible y oportuna. Sin embargo. La investigación realizada evidencia un hecho muy importante, que es la percepción de que gran parte de los contribuyentes no cumplen con sus obligaciones tributarias y no existen consecuencias por eso, lo cual conduce a desmotivar y perder la confianza en el sistema tributario. En este contexto, se propone analizar y evaluar con una mayor precisión el impacto que tienen el tipo de intervenciones conductuales, así como también extender similares estudios al presentado a otras provincias y a diferentes segmentos de contribuyentes, con el propósito de diseñar políticas públicas que resulten de mayor efectividad y contextualizadas a la realidad.

Palabras clave: Transparencia fiscal, moral tributaria, incentivos no coercitivos, cultura de cumplimiento, gestión pública, simplificación de trámites

ABSTRACT: The objective of this study is to analyze how institutional transparency, behavioral incentives, and administrative simplification impact voluntary tax compliance in Ecuador, taking into account the importance of the aforementioned factors in strengthening the tax system. The methodology used included a mixed methodological approach, with a non-experimental design and correlational scope. The data used were both quantitative and qualitative, allowing for a more thorough

analysis of the research problem. Data were collected through structured surveys conducted with taxpayers, and semi-structured interviews were also conducted with tax experts in the province of El Oro. The results obtained demonstrate that variables such as perceptions of tax justice, ease of tax processes, and the effectiveness of information campaigns exert a positive, albeit moderate, influence on taxpayers' willingness to voluntarily comply with their tax obligations. It was determined that taxpayers positively value the clarity of the regulations, the reduction of potentially unnecessary procedures, and the availability of accessible and timely information. However, the research conducted reveals a very important fact: the perception that a large proportion of taxpayers do not comply with their tax obligations and face no consequences, which leads to demotivation and a loss of confidence in the tax system. In this context, it is proposed to more precisely analyze and evaluate the impact of behavioral interventions, as well as to extend similar studies to the one presented to other provinces and different taxpayer segments, with the aim of designing public policies that are more effective and contextualized to reality.

Keywords: Fiscal transparency, tax morality, non-coercive incentives, compliance culture, public management, simplification of procedures

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INTRODUCTION

Currently, all countries face great pressure to finance the services available to their citizens, including health, education, infrastructure, and social security. This need has driven interest in having tax systems that are more efficient, equitable, and sustainable. Although actions have already been taken in many countries, tax evasion, economic informality, and high levels of distrust in public sector institutions continue, which become obstacles to achieving the efficiency and effectiveness of the tax system.

To achieve a better tax system, there are many strategies, but it is important that these are not only coercive or punitive. Therefore, it becomes essential to have strategies that motivate taxpayers to fulfill their tax obligations, and that this is done voluntarily. The Organisation for Economic Co-operation and Development (1) mentions that in scenarios where the demand for public resources stands out, actions prioritized in fiscalization may not be adequate. Therefore, achieving high voluntary tax compliance is an important challenge for tax administrations, mainly where the presence of evasion, highly complex regulations, and the absence of institutional trust is evident.

Tax evasion, intentional omissions, and economic informality have become major obstacles that minimize the capacity that a State can have to achieve the collection of its revenues in a more equitable and sustainable manner (2), (3). It is important to emphasize that this type of practices, in addition to decreasing the availability of public resources, negatively affect what citizens perceive about the legality of the system and the use of public spending.

To face this situation, from this study an integral model is proposed that contributes to improving voluntary tax compliance, for which the use of three axes is proposed: institutional transparency, behavioral incentives, and administrative simplification. Various authors have mentioned that transparency in public administration is important for the incentive of voluntary compliance. Thus, the theory is supported that citizens estimate that those resources that are used with equity, efficiency, and responsibility increase their disposition to voluntarily comply with their obligations (4), (5).

It is also mentioned that from a public administration that exercises its functions in a transparent and responsible manner, it contributes to motivating the compliance of their obligations voluntarily by taxpayers and decreases the possibilities of tax evasion (6). Thus, it can be affirmed that the legality of the tax system is closely related to transparency in the management of public resources.

Some authors assure that a transparent tax administration helps to legitimize the legality of the tax system and lead citizens to have a greater predisposition to compliance (7). This affirmation is considered correct because it is considered that the efficient and fair use of taxes allows strengthening trust in the institutions and fosters a tax culture that has its support in cooperation (8).

It is also considered necessary to analyze the perception of justice in the application of the norms, which also become necessary factors for the incentive of tax compliance. These elements come to have a direct impact on the decisions that citizens make (9); while having a responsible, transparent, and equitable public administration strengthens the commitment of taxpayers (10). On the other hand, the perception of a corrupt system, diversions in benefits, and unequal treatment decreases tax commitment and promotes evasion (11).

Regarding behavioral approaches, these have developed and evolved as necessary tools to motivate compliance with tax obligations. Considering behavioral theory, these approaches seek to establish scenarios that positively influence fiscal behavior, not only in specific aspects, but also by strengthening the relationship between the State and the citizen taxpayers (12). By focusing on aspects such as institutional trust, equity, and the sense of belonging, implementing these strategies contributes to considering more important causes such as evasion.

Considering that there are various factors that can influence the behavior of taxpayers in a determining way, some investigations have estimated the need for the use of nudges or also known as behavioral interventions, through which it is sought to promote tax compliance without the need for the use of sanctions. As strategies to fulfill this aspect, the simplification of tax forms, the sending of reminders with the due date of obligations, the effective communication of the benefits of paying taxes are mentioned, which have evidenced being highly effective (13), (14). Nudges are defined as tools of efficiency in strengthening the relationship between the tax administration and taxpayers, which also promotes a culture of compliance that has as its support co-responsibility.

At the same time, administrative simplification is presented as an indispensable factor in the reduction of the barriers that prevent tax compliance. In this sense, the elimination of procedures that can represent great complexity for the taxpayer, in addition to the improvement in institutional management, not only improve the operational aspect, but also strengthen the perception of legality and accessibility on the part of taxpayers.

In Ecuador, the strengthening of the tax system and voluntary tax compliance are critical areas to address. Regarding tax compliance, it faces several limitations due to the high percentage of economic informality, the scarce tax culture, corruption, and the distrust of institutionalism that taxpayers have. Despite the work carried out by the Internal Revenue Service (SRI) to improve management and facilitate compliance, tax evasion still remains, which is common to identify in sectors such as informal commerce, the free exercise of the profession, and micro and small enterprises (15).

According to data published by the Central Bank of Ecuador (16) and the Internal Revenue Service (17), the evasion of taxes such as VAT and Income Tax has a significant percentage within the GDP; in this way, the Ecuadorian State sees its financing capacity reduced, neglecting key aspects such as the offer of public services. Another situation that aggravates what has already been presented is the perception of corruption on the part of the citizenry, regarding a misuse of public resources, which demotivates tax compliance. Therefore, given the above, it is fundamental to analyze compliance strategies, and that these stop being focused solely on sanctions toward the taxpayer.

MATERIALS AND METHODS

The present research takes a mixed methodological approach, that is, it refers to those techniques of quantitative and qualitative type, whose purpose is to achieve better visibility of the research problem, in this case, tax compliance in Ecuador. From the quantitative aspect, the possible relationship between the variables institutional transparency, behavioral incentives, and administrative simplification is studied statistically. While from the qualitative aspect, it seeks to address from a more practical aspect the perceptions, limitations, and motivations that influence the tax behavior of citizens.

A correlational and propositional methodology is also applied; that is, it seeks to determine the degree of association between the factors already mentioned and tax compliance; while the propositional aspect proposes an integral model that has been used as a basis for those future strategies in the field of Ecuadorian fiscal policy.

The design adopted is non-experimental, cross-sectional, and of explanatory type, since variables are not manipulated, but are observed as they occur in their natural environment, at a determined moment in time (18). The unit of study is composed of taxpayers registered in the Internal Revenue Service (SRI), including natural and legal persons belonging to the RIMPE regime and the general regime, in the province of El Oro.

Regarding the population, object of study, this is composed of the taxpayers who were active between the years 2022 and 2024; for more precision, a convenience sampling was carried out, according to (19), this type of sampling is based on the accessibility to the participants. In this way, the researcher can arbitrarily determine the number of participants and the characteristics of the people who make up the sample. This methodological technique was chosen due to the nature of the study and the need to obtain the information directly from the main stakeholders.

As inclusion criteria for the participants, those taxpayers who carried out their declarations in at least one of the last fiscal years were chosen. On the other hand, taxpayers with definitive closure processes or with legal causes related to tax evasion were excluded.

Once the population and the sample of the study were determined, the collection of information was carried out; in this way, as a first activity, surveys were applied to the selected taxpayers; the questionnaire was structured under a Likert scale, in areas such as: Institutional transparency, tax incentives, ease of the tax system, and voluntary compliance. Complementarily, a documentary analysis was carried out, where information from the SRI, OECD, and scientific articles on tax compliance was studied.

The instruments that were used include a questionnaire and a documentary analysis sheet. In all cases, prior informed consent was applied, ensuring the confidentiality of the data, voluntary participation, and the academic use of the information, in accordance with the ethical principles of research in social sciences (20). This documentary analysis allowed defining the study variables; thus, as dependent variable there is voluntary tax compliance, which is defined as the disposition that the taxpayer has to spontaneously comply with the tax system. Regarding the independent variables, it was determined that they are: institutional transparency, behavioral incentives, and administrative simplification.

Table 1. Study variables.

Variable	Type	Operational definition
Voluntary tax compliance	Dependent	Degree to which the taxpayer complies with their obligations without coercive intervention.
Institutional transparency	Independent	Perception about the clarity and efficiency of the use of fiscal resources by the State.
Behavioral incentives	Independent	Use of non-coercive strategies (messages, reminders, recognitions) to promote compliance.
Administrative simplification	Independent	Ease, clarity, and accessibility of the tax processes for the taxpayer.

Note: The dependent variable measures the level of spontaneous compliance of the taxpayer; the independent ones represent institutional, behavioral, and administrative factors that can influence said conduct.

The analysis of the quantitative data was carried out using the SPSS software. Descriptive statistics were applied to characterize the sample, normality test, correlation test, and multiple linear regression to establish the effect of the independent variables on voluntary tax compliance. The qualitative data obtained from the interviews were analyzed through thematic coding and content categorization (21).

RESULTS

During the period 2023-2024, in Ecuador an evident increase was perceived regarding collection; for the year 2024 it reached a total of USD 20,131 million, which means an increase of 15.6% compared to the collection of the previous year, representing a compliance of 104.8% with the established goal (17). It is estimated that the mentioned collection was motivated by reforms such as the increase in the rate of the Value Added Tax (VAT) and the Currency Exit Tax (ISD).

The information presented in Table 2 demonstrates the relative variation of collection by tax in the period 2023-2024. The results evidence the variation that each analyzed tax has presented, with Income Tax and VAT being those that present significant variations.

Table 2. Variation in collection by tax.

Tax	Collection 2023 (million USD)	Collection 2024 (million USD)	Absolute variation (million USD)	Relative variation (%)
Income Tax	5,818	6,639	821	14.11
VAT	8,444	9,767	1,323	15.67
ICE	827	755	-72	-8.71
ISD	1,088	1,272	184	16.91
Other incomes	1,243	904	-339	-27.27

Note: Adapted from the Internal Revenue Service (2024).

As shown in Table 2, VAT presents the greatest increase in absolute value with USD 1,323 million, which represents a relative variation of 15.67%. This fact is directly attributable to the increase of this tax that went from 12% to 15% starting in April 2024, and whose impact is observed more prominently from the second quarter.

In second place, with greater increase, is the collection of Income Tax, with USD 821 million more than in the year 2023, whose variation is at 14.11%. It is estimated that this increase in the collection of this tax has as its origin the mandatory self-withholding for the largest taxpayers; another aspect that influenced was the application of the tax remission in the first six months of the year 2024.

The Currency Exit Tax (ISD) also evidences an increase, where it presents a relative variation of 16.91% and a collection that amounts to USD 184 million. It is estimated that this increase has as its origin the increase of the rate up to 5% that was carried out in the first quarter of 2024. On the other hand, among the taxes that evidenced a reduction is the Special Consumption Tax (ICE) with USD 72 million, which represents a variation of 8.71%. It is analyzed that this decrease is due to the decrease in imports, also to the increase in the national production of substitute products for imports.

Finally, in the group of other incomes, it was the one that experienced the greatest decrease in absolute and relative values, thus decreasing by USD 339 million, its variation being 27.27%. It is estimated that this decrease responds to a lower generation of incomes, fewer special taxpayers, and fewer fiscal regularizations, which means a transformation toward a financing model with greater sustainability.

Table 3. Statistical analysis by main provinces.

Province	Collection 2023 (Million USD)	Collection 2024 (Million USD)	Absolute variation (Million USD)	Relative variation (%)
Pichincha	8,740	10,192	1,452	16.61
Guayas	5,265	6,229	964	18.31
Azuay	867	939	72	8.30
Manabí	343	399	56	16.31
El Oro	284	292	8	2.82

Note: Adapted from the Internal Revenue Service (2024).

Regarding the analysis carried out by provinces, in Table 3 a positive behavior can be observed between the years 2023 and 2024. The provinces that lead the collection are Pichincha and Guayas, with relative growths of 16.6% and 18.3%. This situation can be a consequence of these provinces having a high number of taxpayers.

In the provinces of Azuay and Manabí an important percentage of participation was also evidenced, presenting a relative variation of 8.3% and 16.1% respectively. These results are key to establishing that in these provinces the levels of tax compliance increased. In the last place of the table, the province of El Oro can be observed, in which a growth of around 3.1% was established, so the collection increased, going from USD 284 million in the year 2023 to USD 292 million in 2024. At first glance these results could be interpreted as positive; the comparisons observed in Table 3 place it in the last place with respect to the other provinces.

On the other hand, the results that were obtained from the surveys carried out in the province of El Oro, whose population currently amounts to 714,592 inhabitants, the information was obtained from 385 people, a sample that was obtained from the formula for finite populations and selected from a convenience sampling. This type of sampling refers to the fact that the participants were selected according to the disposition presented to collaborate in the research, contributing to the data being more accessible, although it is important to mention the limitations regarding its statistical representativeness.

As mentioned by Hernández (2021), convenience sampling contributes to the ease of access to the participants of the investigations, which leads the researcher to be able to determine, arbitrarily, the number of people and the characteristics that they must evidence. For the present study, the target population was composed of those taxpayers duly registered in the Internal Revenue Service (SRI), where both natural and legal persons belonging to the RIMPE regime (Tax Regime for Microenterprises) and the general regime, domiciled in the province of El Oro, were included.

The selection of the participants was carried out in commercial zones, offices, and in tax attention centers. Basic inclusion criteria were also applied such as having a valid Unique Taxpayer Registry (RUC) and having been active in the 2024 fiscal year. The results obtained in the survey are presented in Table 4.

Table 4. Variables with greater statistical representation.

Variable	Mean	Standard deviation	Median
1. Compliance: Perception of non-compliance	3.14	1.477	3.0
2. Incentives: Awareness campaigns	3.09	1.433	3.0
3. Simplification: Ease of the process	3.05	1.410	3.0
4. Compliance: Voluntariness without sanction	3.05	1.402	3.0
5. Transparency: Clarity of the use of taxes	3.02	1.428	3.0

Note: The data reflect the average values and dispersion for the main perceptions collected in the survey applied to taxpayers.

As can be observed in Table 4, the five variables with greater representativeness of the questionnaire carried out to the participants are presented, which were evaluated through statistical tests such as mean, standard deviation, and median. These variables reflect perceptions that are very important for determining tax compliance.

The variable “Perception of non-compliance” is the one that presents the highest mean with 3.14, which can be interpreted as the fact that the citizen perception that several taxpayers are not complying with their fiscal obligations can cause individual demotivation. On the other hand, the variable “Awareness campaigns” with a mean of 3.09 evidences a moderate acceptance of its influence.

While the variables “Ease of the process” and “Voluntariness without sanction” obtain a mean of 3.05 each. Finally, the variable “Clarity in the use of taxes” reached a mean of 3.02, demonstrating the existence of ambiguous perceptions regarding state transparency in the use of public resources. Among the results of the study, normality tests, correlation, and a multiple linear regression model were also carried out, with the objective of evaluating the relationship and the effect that the independent variables have with respect to compliance with their fiscal obligations without coercion.

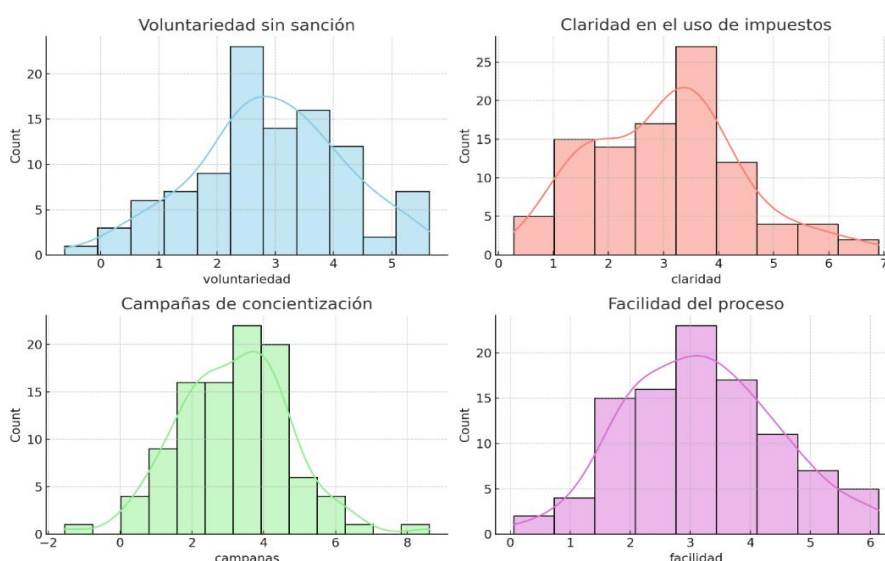


Figure 1. Distributions presented by the independent and dependent variables. Model of voluntary tax compliance.

Note: The figures presented show the distribution of the responses that were obtained in the analysis of each of the variables that form part of the model.

In Figure 1 the histograms with density curve for each of the variables that form part of the regression model are observed. As is evidenced in each of the variables, the distribution is very close to symmetry, indicator of normality, which is necessary to be able to carry out the symmetric tests. Many of the responses obtained are concentrated around the mean value of the scale, that is between 2.5 and 4, although the presence of dispersion is also evident.

It is necessary to emphasize that extreme asymmetries or marked outliers are not observed; therefore, it could be established that there is an adequate quality of the data collected to continue with the statistical analysis. In addition to the histograms with density curves, the Omnibus and Jarque-Bera normality tests were applied, whose results confirmed that the analyzed variables present an approximately normal distribution ($p > 0.05$ in all cases), which supports the validity of the use of parametric tests such as Pearson and multiple linear regression.

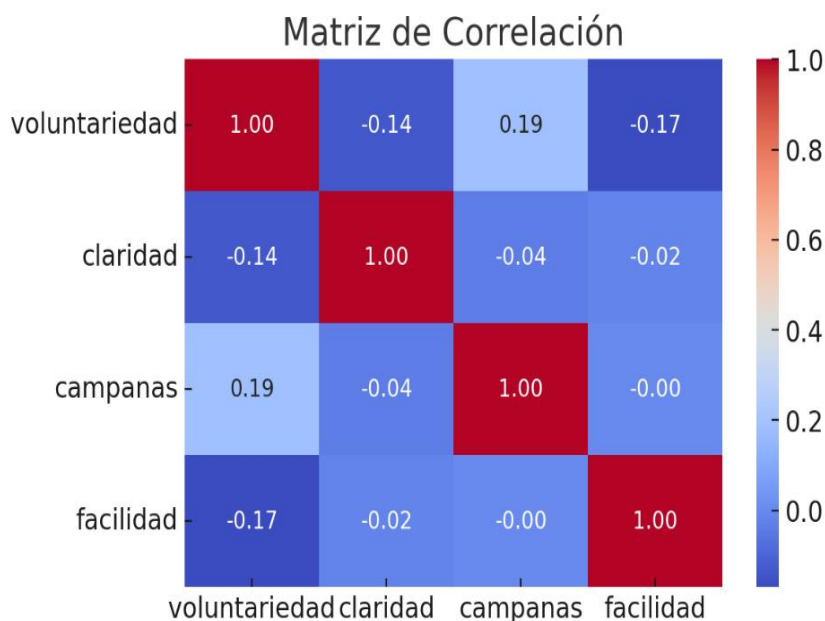


Figure 2. Correlation matrix between the variables of the voluntary tax compliance model.

Note: The matrix demonstrates the linear relationships that have low significance. The correlation with greater influence is found between awareness campaigns and voluntary compliance with $r = 0.19$.

To carry out the analysis of the relationships that are presented between the variables of the model, a correlation matrix was carried out, making use of the Pearson coefficient. This model was chosen because the quantitative variables evidenced an approximately normal distribution, as was visualized in the histograms with density curves exposed in Figure 1.

While Figure 2 contributes to visualizing the intensity and direction of the relationships between the variables present in the model. In this sense, the values that are visualized in the matrix put into evidence the degree of association between the pairs of variables; the instrument employed was a chromatic scale that allowed a better

interpretation of the results. The values that are signaled with the color red demonstrate the existence of higher and positive correlations; on the other hand, the blue color tones indicate negative and weak relationships.

Table 5. Regression results.

Note: The dependent variable is voluntary tax compliance. The model is significant at the global level ($p < 0.05$), although no individual variable reaches statistical significance at 5%.

The multiple linear regression analysis sought to establish voluntary tax compliance through transparency in the use of what is collected by taxes, awareness campaigns, and the ease that can be presented in the process, for which the applied model was a multiple linear regression by ordinary least squares:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where:

Y: Voluntary tax compliance

X_1 : Clarity in the use of taxes (institutional transparency)

X_2 : Awareness campaigns (behavioral incentives)

X_3 : Ease of the process (administrative simplification)

β_0 : Intercept

$\beta_1, \beta_2, \beta_3$: Regression coefficients

ε : Error term

Where the model was statistically significant ($p = 0.039$) and explained 8.3% of the variability of the dependent variable ($R^2 = 0.083$).

Awareness campaigns demonstrated a positive influence close to significance ($p = 0.060$); on the other hand, the ease of the process evidences a marginally significant negative effect ($p = 0.081$). Clarity in the use of taxes did not result significant. The fulfillment of the assumptions is considered a support regarding its validity, although the effects that were observed establish the need to carry out additional studies that allow confirming the influence that each factor may come to have.

Although the results obtained offer valuable information to understand as a whole the institutional, behavioral, and administrative factors that explain tax compliance; the analyzed variables do not evidence statistical significance individually within $p < 0.05$, their contribution as a set of variables is significant and offering the opportunity to deepen in future lines of research.

OLS Regression Results						
Dep. Variable:	voluntariedad	R-squared:	0.083			
Model:	OLS	Adj. R-squared:	0.054			
Method:	Least Squares	F-statistic:	2.894			
Date:	Mon, 16 Jun 2025	Prob (F-statistic):	0.0392			
Time:	01:56:05	Log-Likelihood:	-161.22			
No. Observations:	100	AIC:	330.4			
Df Residuals:	96	BIC:	340.9			
Df Model:	3					
Covariance Type:	nonrobust					
	coef	std err	t	P> t	[0.025	0.975]
const	3.3619	0.519	6.483	0.000	2.332	4.391
claridad	-0.1240	0.091	-1.356	0.178	-0.306	0.058
campanas	0.1524	0.080	1.901	0.060	-0.007	0.311
facilidad	-0.1762	0.100	-1.765	0.081	-0.374	0.022
Omnibus:	0.202	Durbin-Watson:	2.030			
Prob(Omnibus):	0.904	Jarque-Bera (JB):	0.272			
Skew:	0.103	Prob(JB):	0.873			
Kurtosis:	2.850	Cond. No.	24.2			

Figure 3. Residuals plot of the multiple linear regression model.

Note: The figure shows a homogeneous distribution of the residuals around zero, without evidence of systematic patterns.

In Figure 3 the relationship between the adjusted values of the regression model and the residuals that were obtained is evidenced. The red line allows observing the possible deviations from the expected pattern. The validity of the model is demonstrated due to the stability in the variance of the errors and not recognizing structures that insinuate adjustment problems. In this context, the validity of the estimated model is strengthened.

The results evidence that the considered variables come to fulfill the normality assumption, so it is possible to employ parametric techniques, among which are Pearson correlation and multiple linear regression. It is precise to indicate that the correlation matrix evidenced that linear associations that were not so strong remained, while a moderate positive relationship was also observed between the variables "awareness campaign" and "voluntary compliance" with $r = 0.19$. The regression model presented itself statistically significant ($p = 0.039$) and it was possible to explain 8.3% of the variability of the tax behavior, which in the joint analysis of the model is moderate, but of relevance. Regarding the variables, the one that presented with potential to exercise greater influence was "awareness campaigns," with a marginal significance of $p = 0.060$.

TRIS Model for the improvement of voluntary tax compliance in Ecuador: A strategy based on transparency, incentives, and simplification

Tax compliance should not be considered as a response of citizens before the threat of receiving sanctions, but should be considered as a situation that depends on various factors, whether these of institutional, behavioral, or operational type. Under this perspective the TRIS model is composed of three basic axes:

1) Institutional transparency; 2) Behavioral incentives and 3) Administrative simplification. From this model, it is expected to demonstrate the relationship

between them and the capacity that they may have to achieve a tax system that is fair, equitable, and sustainable.

1. Institutional transparency

Institutional transparency is a basic component to reinforce the fiscal parameters, defined as the reciprocal agreement between the State and the citizens, in relation to the collection of taxes and the supply of public goods. Distrust in the institutions and the perceived levels of corruption seem to lead people to see taxes as an illegitimate burden, which in turn weakens tax morale and the general will to comply with their taxes. On the contrary, if the public administration assumes in a transparent manner the responsibility for the public resources and communicates well the use of these resources, it improves the integrity of the fiscal system and fosters that people pay their taxes (22).

The open government model as a new political design with principles to act, which bets on transparency and collaboration between the institutions, allows the population to approach the way in which fiscal management is carried out. The presence of available and detailed updated information on public incomes and expenses, and the social audit of projects and mechanisms of citizen participation in budgetary control increase the perception of fiscal justice. Taxpayers are more prone to comply with their taxes if they perceive that the public resources are managed in an effective, fair manner and without favoritism (23).

In Ecuador, the creation of portals that allow knowing the management of the institutions mainly of the Internal Revenue Service (SRI) and of the Ministry of Economy and Finance stands out as an important decision, although the problems regarding accessibility to the portals, communication, and digital and fiscal literacy continues being an aspect at the institutional level.

The data obtained from the SRI indicate that the cantons of the province of El Oro, with more relevant public investment are Machala and Santa Rosa, while the other cantons are found below the average of the province (17). This information, in a certain way, communicates that citizens react positively when they feel that their taxes are returned in the form of public services, which improves their lifestyle by having public infrastructure, basic services, the implementation of social projects, among others.

In the same way, the participatory budget and the public hearings fostered by the lower levels of the autonomous governments can be a complementary system to increase transparency in the use of public resources. That will not only equalize the collection of incomes of the fiscal management and the level of the citizen as an active actor in the circle of public management, but also distinguishes the principle of fiscal co-responsibility (24).

2. Behavioral incentives

In line with the theory of behavioral economics, the use of non-coercive tools, such as personal reminders, messages that appeal to the social norm or symbolic recognitions, could foster the voluntary compliance of taxes (25). In contrast with the conventional

approaches centered on sanctions or direct economic incentives, the behavioral interventions operate through psychological and social pathways that affect the decisions of people.

The success of the strategies already mentioned has been demonstrated in various scenarios at the institutional level. Countries such as the United Kingdom, Peru, and Argentina have demonstrated positive results regarding tax compliance, where a growth of the tax collection between 4% and 10% is observed (26). The results obtained by these countries evidence that taxpayers are not only motivated before the sanctions for non-compliance, but also positive results are observed with a better communication of the norms and the tax benefits and the reciprocity that they receive from the tax system.

In scenarios where trust in the State is not high and where the tax culture presents itself with limitations, the behavioral incentives take great importance. Some authors affirm that the behavioral incentives can be contextualized to the socio-cultural environment, reinforced with messages that incentivize voluntary compliance (27). Moreover, it is estimated that when the tax authority remits the information in a clear manner toward where their taxes are directed, their disposition to exercise their obligations on time is seen increased.

In Ecuador, this type of initiatives are carried out by the Internal Revenue Service in the period 2022 and 2023, they took into consideration the diffusion of motivational messages, making use of a positive language, making the messages very visual on their digital platforms for the compliance of the fiscal obligations.

3. Administrative simplification

A tax administration that is accessible, transparent, and intelligible enjoys a substantial reduction of the compliance costs, particularly for the taxpayers who experience technical limitations, have minimal digital knowledge, or are economically restricted. In this sense, the simplification of the administration not only improves voluntariness, but is also an instrument of fiscal inclusion, since it reduces the structural obstacles that prevent small taxpayers, informal workers, and new entrepreneurs from participating in the formal tax structure (28).

The simplification of the tax procedures from the point of view of the user means, for example, that the procedures are computerized, the forms are simplified, and irrelevant documentation is dispensed with. An initiative of cost saving like this has an impact on the perception of equity and professionalism within the headquarters.

Recent studies have demonstrated that a positive experience in the interactions with the tax administration can influence directly the disposition of the taxpayers to declare and pay taxes, especially in simplified systems (29). In the country, the Internal Revenue Service has taken actions to simplify the tax processes and make them much more understandable for the citizens. In addition, financial and technological literacy campaigns have been implemented (30). It is expected that with these strategies the errors and omissions are reduced, in addition to motivating the citizens to comply with their obligations on time and in a voluntary manner.

Applicability of the TRIS model

It is important that the adoption of the TRIS Model is carried out in a progressive and collective manner, being carried out in three stages: diagnosis, pilot intervention, and then expanded at the national level. Upon being implemented in this order the local appropriation, the gradual implementation, its evaluation, the validity of the results obtained, and its sustainability in the long term are assured. From the diagnosis it is intended to identify the barriers for tax compliance, which requires a methodology focused on the statistical and qualitative, for better precision, it must be carried out by sector and region, seeking to characterize the fiscal risk profiles and how to generate greater trust in the tax system (31).

The pilot process must prioritize the implementation of the model in territories that demonstrate typical conditions and operative capacity in different types of institutions. The action must be implemented jointly by the Internal Revenue Service (SRI), the decentralized autonomous governments (GADs), business organizations, and civil society. This multilevel governance could lead to a more socially acceptable and legitimized implementation.

For the three dimensions of the TRIS Model there are respective indicators to evaluate them. Regarding transparency, one can consider measuring the level of transparency of the citizens in the use of the taxes, that is, how much the citizens know about how their taxes are used and how fair they perceive that the public investment is, since it has been found that this is a strong determinant of tax compliance (22).

Regarding the behavioral incentives, the indicators are the response rates to messages that are not coercive, the number of times that interactive content is experienced, and the impact of the comparison of the respective response in terms of compliance in treatment and control. For the simplification: average declaration times, reduction of formal errors, user satisfaction with the fiscal exercise.

These indicators are aligned to the proposed intervention model, as well as having a fiscal policy that is more inclusive and focused on the citizen, where their diversity and the capacities that they present are recognized. It is a very adaptable model, which allows the design of campaigns adapted to the profiles of the taxpayers. Another of the objectives of the model is to improve the relationship that exists between the State and the citizens, expecting in this way to reach a fiscal culture that is equitable and sustainable.

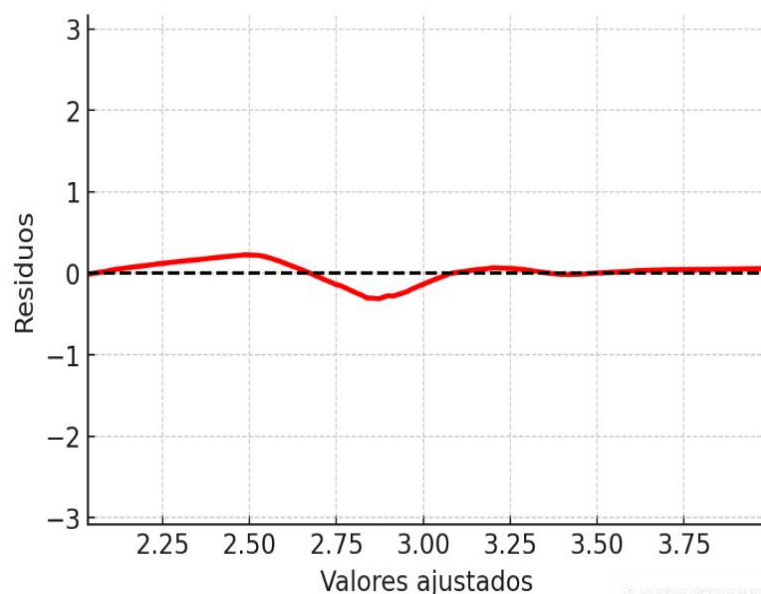


Figure 4. TRIS Model (Transparency, Incentives, Simplification).

Note: In the figure the hierarchical conceptual map of the TRIS Model can be observed.

DISCUSSION

The present research has allowed the development of a model where a set of factors can be integrated that applied in the Ecuadorian context seek to incentivize the voluntary tax compliance of the fiscal obligations. This model integrates three variables of great relevance: Institutional transparency, Behavioral incentives, and Organizational simplification. It is contraposed to the traditional model centered on control and sanction; the proposal recognizes the complexity of the behavior of the taxpayers, so its recommendations focus on the fiscal behavior and on the recommendation of structural measures as behavioral that strengthen the trust of the citizenry and the voluntary tax compliance is promoted.

The results obtained also find support in the theoretical framework cited in the development of the research. Thus, various investigations mention that transparency in the management of the public funds and the trust of the citizens in the institutions are the main factors that incentivize voluntary tax compliance (8) (9). This is confirmed with the variable "clarity in the use of the taxes," whose results place it as one of the most statistically significant, with an average of 3.02, locating it in an intermediate understanding, but that can be adjusted by means of more efficient communication policies regarding the use of the public resources.

It is also necessary to mention that the relevance regarding the use of behavioral incentives is very documented in the scientific publications (12), (13). Regarding the results obtained, the awareness campaigns reached an average of 3.09, which ends by confirming its influence on the voluntary compliance of the taxpayers. Another aspect that stands out is the simplification of the bureaucratic procedures, which exercises a direct influence on the voluntary compliance, so the results obtained reveal an average of 3.05 in the variable "ease of the process." This fact finds its support in some studies

that mention that a vision of simplicity and ease in the process of declaration of the taxes improves the tax morale of the taxpayers and consequently, the evasion is decreased (32).

In this scenario and in concordance with the general tendencies and the identified relationships, it can be established that a positive correlation of significance is evidenced between the perception of equity, the ease of the procedures, and the institutional recognition to the will to comply voluntarily with the fiscal obligations. The variable of “perception of others’ non-compliance” with a mean of 3.14 puts into evidence the impact that the social norms have on the tax behavior of the citizens; in this sense, it is determined that the taxpayers imitate the behavior that they consider correct within their context.

Nevertheless, there were also exceptions and areas with a weaker correlation. For example, the factor “Voluntariness without sanction” with an average of 3.05, suggests that a psychological dependence on the threat of punishment continues being a restrictive element over the autonomy of the compliance. In addition, the heterogeneity of the reactions, reflected by the standard deviations superior to 1.4 for the four factors, indicates that there is not a general perception about the tax system; the variations could be related to the regime of government, the level of education, the incomes, or past experiences with the fiscal authority.

The size of the sample, obtained by the convenience sampling employed in the research can be a limitation regarding the generalization of the results toward the total population of the taxpayers, which, depending on the scenario in which it is desired to analyze, can become a disadvantage for the study. It is precise to note that the size of the sample, which amounts to 385 taxpayers of the province of El Oro, can limit regarding the geographic and economic variation of the study.

The general results of the research determine that the voluntary compliance of the fiscal obligations in Ecuador can have better effects upon implementing an integrating policy, where factors such as institutional transparency, behavioral incentives, and administrative simplification are considered. The results presented support the theory that the studied dimensions generate influence so that the citizens comply with their tax obligations, but it is also necessary to consider that their effectiveness depends to a great extent on the manner in which these strategies are diffused.

As a consequence of the results obtained, lines of future research are proposed, centered specifically on three key elements: 1) Longitudinal studies that allow determining the evolution of the tax morale in the course of time, specifically this aspect is considered because it is important to know how the possible future tax reforms influence the behavior of the taxpayers; 2) Multivariate analyses for the identification of determinants of the voluntary compliance, which should be classified according to the types of taxpayers; 3) Design and evaluation of behavioral interventions, which should be coordinated for their execution with the tax authority; this will allow knowing the real impact that the behavior of the taxpayers has on the fiscal collection.

In addition, the extension of the analysis to more provinces and economic sectors is proposed, contextualized with other variables such as gender, education, and digital access, which allows a greater substantive generation of knowledge about the tax phenomenon and for the trust in the process of consolidation of fiscal policies that are inclusive and sustainable.

CONCLUSIONS

The results of the study lead us to affirm that the proposed model, centered on institutional transparency, behavioral incentives, and the administrative simplification of the public institution, provides an interesting tool to promote the voluntary compliance of taxes in Ecuador. The normality assumption was fulfilled in the explored variables, which allowed the use of parametric techniques such as Pearson correlation and multiple linear regression through ordinary least squares.

Despite the fact that in the correlation matrix the linear relationship between the variables was low, a moderate positive correlation arose with the awareness campaigns and the fiscal compliance ($r = 0.19$). The regression model was statistically significant ($p = 0.039$) and explained 8.3% of the variance in the voluntary fiscal behavior. Although this explanation is weak, it suggests an interactive effect on the part of the independent variables.

Of the analyzed factors, the awareness campaigns demonstrated having the most positive effect, achieving a level of marginal significance ($p = 0.060$), in this way it becomes an intervention device that has a great influence. But it is also necessary to note that no variable at the individual level resulted highly significant at the statistical level. This information evidences that by themselves the variables do not serve as strong predictors within the established confidence limit.

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