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Feasibility Study of the Application of Proposals for the Implementation of Compliance in the Low-Quantity Process in Public Procurement in Ecuador Using Plithogenic SWOT Analysis

Víctor-Gustavo Gómez-Rodríguez[1], Noel Batista-Hernández[2], Willian-Paul Avilés-Quiñonez[3], Johanna-Irene Escobar-Jara[4], Roberto-Eduardo Vargas-Zambrano[5], Ronald-Marcelo Sánchez-Rovalino[6], Alejandro Reigosa-Lara[7], and Duniesky Alfonso-Caveda[8]

[1] Bolivarian University of Ecuador (UBE), Durán. Ecuador. E-mail: vgomez@ube.edu.ec
[2] Bolivarian University of Ecuador (UBE), Durán. Ecuador. E-mail: nbatistah@ube.edu.ec
[3] Bolivarian University of Ecuador (UBE), Durán. Ecuador. E-mail: paviles45@gmail.com
[4] Bolivarian University of Ecuador (UBE), Durán. Ecuador. E-mail: jiescobarj@ube.edu.ec
[5] Southern Manabi State University, Jipijapa. Ecuador. E-mail: rovarza2006@gmail.com
[6] University of the Pacific, Guayaquil, Ecuador. E-mail: ronald.sanchez@upacifico.edu.ec
[7] Bolivarian University of Ecuador (UBE), Durán. Ecuador. E-mail: areigosal@ube.edu.ec
[8] Bolivarian University of Ecuador (UBE), Durán. Ecuador. E-mail: dalfonsoc@ube.edu.ec

Abstract. Compliance is a concept that means that the organization conforms to the legal regulations in force in the country where it is located. This avoids additional expenses on the part of the company and economic losses due to non-compliance with the regulatory legal framework. In the case of the low-value process in public purchases in Ecuador, it is necessary to take this aspect into account, especially in the anti-corruption fight that is currently being carried out worldwide. To study the positive and negative factors that influence the application of compliance in Ecuadorian public purchases, we use the plithogenic SWOT analysis. The SWOT analysis studies the Strengths, Weaknesses, Opportunities, and Threats to carry out a project. The hybridization with the plithogenic theory allows us to analyze the data taking into account the complexity and dynamics of the scenarios studied.

Keywords: Compliance, low-value, public procurement, plithogerny, SWOT analysis, plithogenic number.

1 Introduction

Public procurement in Ecuador represents on average 4% of the Gross Domestic Product (GDP) and 15.2% of the General State Budget, which is a significant part of public spending and crucial for the economic and social development of the country. Through the acquisition of goods, services, and works, the State can execute public policies, build infrastructure, and provide essential services to citizens. In this context, ensuring transparency, integrity, and efficiency in the use of public resources is of vital importance. However, public procurement is also exposed to risks of corruption and embezzlement, which can undermine citizens' trust in public institutions and negatively affect economic development.

In Ecuador, the technical and regulatory body for public procurement is the National Public Procurement Service. This body is responsible for articulating, controlling, and supervising all actions related to public procurement under criteria of effectiveness, efficiency, transparency, quality, and concurrence. Its mission is to ensure that public institutions and suppliers comply with established regulations and that procurement processes are carried out fairly and transparently.

Public procurement procedures in Ecuador are determined by the amount and purpose of the contract, which may include standardized and non-standardized goods and services, works, and consultancies. Each type of purchase is subject to monetary limits that vary annually according to the Initial State Budget. This allows contracting thresholds to be adjusted to the economic and financial realities of the country, guaranteeing flexible management adapted to the needs of the State.

The regulatory framework governing public procurement in Ecuador is broad and detailed, providing a clear structure for all actors involved. Below are the main types and procedures of public procurement, which are reflected in the following table:

Table 1: Regime, Types, and Procedures of Public Procurement in Ecuador.

Contracting Regime	**Type of Contract**	**Procedure**
Common Regime	Standardized Goods and Services	Electronic Reverse Auction, Public Competition
	Non-Standard Goods and Services	Quotation, Public Tender
	Works	Direct Contracting, Tendering
	Consultancies	Merit and Opposition Competition, Direct Hiring
Special Regime	Urgent Acquisitions	Direct Contracting
	International Acquisitions	Simplified Procedure, Based on International Organization Standards
	Artistic Works	Special Procedure, Direct Selection

The term SWOT (Strength, Weakness, Opportunity, and Threat) is a widely used method within companies and in other areas as well, to determine the development prospects of the entity and the impediments to achieving this development [1-4]. It studies the balance between the positive and negative for the advancement of the entity, both internally and externally within the organization. The internal can be improved within the organization itself, while the external must be dealt with.

It is known that companies and their environment exchange in a dynamic way. That is why when studying the four aspects of the SWOT this exchange must be analyzed concerning time, since it is not static. In addition, it consists of multiple variables, some of which are unknown, or in other cases the relationship between variables is unknown. That is why the crisp treatment of the SWOT tool is not necessarily realistic since some uncertainty tools such as fuzzy or neutrosophic have been incorporated into it [5-11].

In this article, we apply the theory of plithogeny [12]. This term was coined by Professor Florentin Smarandache and is used to indicate the dynamic exchange between concepts where not only the concept <A> and its complementary opposite <AntiA> intervene as in classical dialectics, but also the interaction between <A> and <AntiA> and also that which is neither one nor the other denoted by <NeutroA>. It also includes the interaction with other concepts and their neuters or opposites such as <B> or <AntiB> or <NeutroB>, as well as <C> or <AntiC> or <NeutroC> and so on. Etymologically this word comes from Greek as a combination of the words *plitho* (many) and *geniá* (generation).

Plithogenic SWOT analysis is used here to study the implementation of compliance in the process of low-value public procurement in Ecuador. With this combination of tools, we will obtain more realistic results because we base ourselves on the changing dynamics of companies.

The paper is divided into a Materials and Methods section, where SWOT analysis and plithogenic theory are explained. In the next section, we explain the procedures and results applied to the problem we propose to study. The last section is devoted to giving the conclusions.

2 Materials and Methods

2.1 SWOT Analysis

A SWOT analysis serves as a tool for assessing a company or a specific project. It evaluates its internal strengths and weaknesses alongside external opportunities and threats, utilizing a square matrix.

The analysis must be conducted by four stages:

- Examining external influences,
- Exploring internal elements within the organization,
- Developing a SWOT analysis matrix,
- Determining the appropriate strategy to implement.

An organization cannot exist without its surroundings. Looking at what is happening around it helps us understand the chances and challenges that might affect the organization. These elements involve examining external factors. Opportunities are favorable circumstances in our environment that we can capitalize on once we become aware of them. Threats refer to challenging external situations related to a program or project that may lead to difficulties. When these threats occur, it is important to create a good plan to deal with them.

During a SWOT analysis, we need to look at the internal parts of a business, specifically its strengths and weaknesses. This encompasses factors such as the financial resources and assets available, the expertise of its

workforce, the caliber of its offerings, the structure of the organization, and customer perceptions of the company.

Internal analysis helps the organization identify its strengths and weaknesses by studying the amount and quality of its resources and processes. Strengths refer to the positive aspects of a program or project that set it apart from comparable initiatives. Weaknesses refer to existing skills, resources, and attitudes within the organization that hinder its overall performance. Weaknesses are issues inside a person or a group. When we find them and come up with a good plan, we can and should fix them.

The four parts of the analysis are arranged in a matrix and checked by experts. These results are combined based on the percentages from their ratings. We can find more information about this method in sources [1, 2].

When we put together our strengths and opportunities, it shows us possibilities that can help the organization succeed best. Weaknesses and threats create limitations that are a serious warning. At the same time, the risks (which come from both strengths and threats) and challenges (which come from both weaknesses and opportunities) will need to be thought about carefully. These considerations will direct the organization's journey toward its envisioned future.

2.2 Basics of Plithogeny Theory

Let U be a universe of discourse, and P a non-empty set of elements, $P \subseteq U$. Let A be a non-empty set of *one-dimensional* attributes $A = \{\alpha_1, \alpha_2, \dots, \alpha_m\}$, $m \geq 1$; and let $\alpha \in A$ be a given attribute whose spectrum of all possible values (or states) is the nonempty set S, where S can be a discrete finite set $S = \{s_1, s_2, \dots, s_l\}$, $1 \leq l < \infty$, or an infinitely countable set $S = \{s_1, s_2, \dots, s_\infty\}$, or an infinitely uncountable (continuous) set $S =]a, b[$, $a < b$, where] ... [is any open, half-open, or closed interval of the set of real numbers or another general set.

Let V be a nonempty subset of S, where V is the range of all attribute values needed by experts for their application. Each element $x \in P$ is characterized by the values of all attributes in $V = \{v_1, v_2, \dots, v_n\}$, for $n \geq 1$.

In the set of attribute values V, generally, there is a *dominant attribute value*, which is determined by experts in their application. The dominant attribute value means the most important attribute value that experts are interested in.

Each attribute value $v \in V$ has a corresponding *degree of appurtenance* $d(x, v)$ of the element x, to the set P, for some given criteria.

The degree of membership can be a *fuzzy degree of appurtenance*, an *intuitionistic fuzzy degree of appurtenance*, or a *neutrosophic degree of appurtenance* to the plithogenic set [12].

Therefore, the *attribute value appurtenance degree function is:*

$$\forall x \in P, d: P \times V \to P([0,1]^z) \quad (1)$$

Thus $d(x, v)$ is a subset of $[0,1]^z$, where $\mathcal{P}([0,1]^z)$ is the power set of $[0,1]^z$, where z = 1 (*fuzzy degree of appurtenance*), z = 2 (for the *intuitionistic fuzzy degree of appurtenance*), or z = 3 (for the *neutrosophic degree of appurtenance*).

Let $|V| \geq 1$ be the cardinal. Let $c: V \times V \to [0,1]$ be the *attribute value contradiction degree function* between any two attribute values v_1 and v_2, denoted by $c(v_1, v_2)$, and satisfying the following axioms:

1. $c(v_1, v_1) = 0$, the degree of contradiction between the same attribute values is zero;
2. $c(v_1, v_2) = c(v_2, v_1)$, commutativity.

We can define a *fuzzy attribute value contradiction degree function* (c as before, which we can denote by c_F to distinguish it from the next two), an *intuitionistic fuzzy attribute value contradiction function* $c_{IF}(\cdot)$, or more generally, a $c_{IF}: V \times V \to [0,1]^2$. *Neutrosophic attribute value contradiction degree function* ($c_N: V \times V \to [0,1]^3$) can be used, increasing the complexity of the calculation, but also increasing the precision.

We mostly figure out how much one-dimensional attribute values disagree with each other. For multi-dimensional attribute values, we break them down into one-dimensional attribute values.

The attribute value contradiction degree function helps improve the results of certain grouping methods and the related order system.

The way we measure how much different values disagree with each other is set up for each area where a special type of group is used, based on the specific problem that needs solving. If we disregard the details, the computations will still be performed, but they may not yield reliable results.

So (P, a, V, d, c) is called a *plithogenic set*, [12-16]:

1. Where "P" is a set, "a" is an attribute (multidimensional in general), "V" is the rank of the attribute values, "d" is the degree of appurtenance of the attribute value of each element x to the set P concerning some given criteria ($x \in P$), and "d" means "d_F" or "d_{IF}" or "d_N", when it is a fuzzy degree of appurtenance, an intuitionistic fuzzy degree of appurtenance, or a neutrosophic degree of appurtenance respectively of an element x to the plithogenic set P;

2. "c" stands for "c_F" or "c_{IF}" or "c_N", when it comes to the fuzzy degree of contradiction, fuzzy intuitionistic degree of contradiction, or neutrosophic degree of contradiction between attribute values respectively.

Functions $d(\cdot,\cdot)$ and $c(\cdot,\cdot)$ are defined according to the applications that experts need to solve.

The notation used is:

$x(d(x,V))$, where $d(x,V) = \{d(x,v), \text{ for all } v \in V\}, \forall x \in P$.

The degree of attribute value contradiction is calculated between each attribute value concerning the dominant attribute value (denoted by v_D) in particular and to other attribute values as well.

The attribute value contradiction degree function c between the attribute values is used in the definition of *plithogenic aggregation operators* (intersection (AND), union (OR), implication ($\Longrightarrow$), equivalence ($\Longleftrightarrow$), inclusion relation (partial order), and other plithogenic aggregation operators combining two or more attribute value degrees acting on the t-norm and t-conorm.

Most plithogenic aggregation operators are linear combinations of the fuzzy t-norm (denoted by $\wedge_F$), and the fuzzy t-conorm (denoted by $\vee_F$), but nonlinear combinations can also be constructed.

If the t-norm is applied on the dominant attribute value denoted by v_D, and the contradiction between v_D and v_2 is $c(v_D, v_2)$, then on the attribute value v_2 the following applies:

$$[1 - c(v_D, v_2)] \cdot t_{norm}(v_D, v_2) + c(v_D, v_2) \cdot t_{conorm}(v_D, v_2) \quad (2),$$

Or, by using symbols:

$$[1 - c(v_D, v_2)] \cdot (v_D \wedge_F v_2) + c(v_D, v_2) \cdot (v_D \vee_F v_2) \quad (3).$$

Similarly, if the t- conorm is applied on the dominant attribute value denoted by v_D, and the contradiction between v_D and v_2 is $c(v_D, v_2)$, then on the attribute value v_2 the following applies:

$$[1 - c(v_D, v_2)] \cdot t_{conorm}(v_D, v_2) + c(v_D, v_2) \cdot t_{norm}(v_D, v_2) \quad (4).$$

Or, by using symbols:

$$[1 - c(v_D, v_2)] \cdot (v_D \vee_F v_2) + c(v_D, v_2) \cdot (v_D \wedge_F v_2) \quad (5).$$

The *Plithogenic Neutrosophic Intersection* is defined as:

$$(a_1, a_2, a_3) \wedge_P (b_1, b_2, b_3) = \left(a_1 \wedge_F b_1, \frac{1}{2}[(a_2 \wedge_F b_2) + (a_2 \vee_F b_2)], a_3 \vee_F b_3\right) \quad (6),$$

The *Plithogenic Neutrosophic Union* is defined as:

$$(a_1, a_2, a_3) \vee_P (b_1, b_2, b_3) = \left(a_1 \vee_F b_1, \frac{1}{2}[(a_2 \wedge_F b_2) + (a_2 \vee_F b_2)], a_3 \wedge_F b_3\right) \quad (7),$$

In other words, concerning what applies to belonging, the opposite applies to non-belonging, while in indeterminacy the average between them applies.

The *Plithogenic Neutrosophic Inclusion* is defined as follows:

Since the degrees of contradiction are $c(a_1, a_2) = c(a_2, a_3) = c(b_1, b_2) = c(b_2, b_3) = 0.5$, it applies: $a_2 \geq [1 - c(a_1, a_2)]b_2$ or $a_2 \geq (1 - 0.5)b_2$ or $a_2 \geq 0.5b_2$ while $c(a_1, a_3) = c(b_1, b_3) = 1$.

Having $a_1 \leq b_1$ the opposite is done for $a_3 \geq b_3$, where $(a_1, a_2, a_3) \leq_P (b_1, b_2, b_3)$ if and only if $a_1 \leq b_1$ and $a_2 \geq 0.5b_2, a_3 \geq b_3$.

3 The Study

Regardless of the type and procedure of contracting, all public contracting in Ecuador is carried out in three fundamental phases, by the provisions of the National Public Procurement Service Resolution No. 72, of January 2018. These phases are:

1. **Preparatory Phase**: The contracting entity defines its needs and specifies the technical and administrative requirements. In addition, a market study is carried out to determine the reference budget. This stage ends with the signing of the resolution to start and publish the process authorized by the highest authority of the entity or its delegate.
2. **Pre-Contractual Phase**: This stage begins with the publication of the process on the public procurement portal and includes the call for tenders, the reception and evaluation of offers, and the award to the supplier with the best offer, and ends with the signing of the contract.
3. **Contractual Phase**: Once the contract has been awarded, it is administered and monitored to supervise its compliance. This is the most important stage in a public procurement process because it includes the management of resources, verification of compliance with the contractual conditions, and evaluation of the results obtained.

The legal framework that regulates public procurement in Ecuador is made up of a series of laws, regulations, and standards that establish the principles and procedures that must be followed for the acquisition of goods, services, and works by the State. Among the main regulations are:

- Organic Law of the National Public Procurement System (*LOSNCP* in Spanish): This law establishes the general framework for public procurement in Ecuador, defining the principles of transparency, equality, free competition, efficiency, and publicity that must govern all procurement processes. The *LOSNCP* seeks to ensure that procurement processes are carried out fairly and equitably, promoting the participation of a greater number of suppliers and avoiding monopolistic practices.
- General Regulations of the Organic Law of the National Public Procurement System: This regulation develops and specifies the provisions of the *LOSNCP*, establishing the specific procedures for public procurement. It details the stages of the procurement process, from planning and calls for tenders to the award and execution of the contract, ensuring that the principles established in the law are met.
- Comprehensive Organic Criminal Code (*COIP* in Spanish): Includes specific provisions on crimes related to corruption in the field of public procurement, highlighting the importance of compliance as a tool to prevent and punish these crimes. The *COIP* establishes severe sanctions for those who commit acts of corruption and promotes transparency and accountability in public institutions.
- Resolutions and Guidelines Issued by the National Public Procurement Service (*SERCOP* in Spanish): These resolutions and guidelines complement the main regulations, providing guidelines and criteria for the implementation of public procurement policies. *SERCOP* is the body in charge of supervising and regulating public procurement processes in Ecuador, and its guidelines are essential to ensure the correct application of the *LOSNCP* and the corresponding regulations.

The variables related to the implementation of compliance in Ecuador in public procurement can be classified as follows:

Internal variables:

Strengths (Positive)

S1: There are monitoring and internal audit mechanisms that are facilitated by the adoption of technological tools, such as anonymous reporting systems and data analysis platforms, which allow effective monitoring of suspicious transactions and operations.

S2: The Ecuadorian government has taken important measures to promote the implementation of compliance systems, such as the creation of the Organic Law on the Fight against Corruption, which establishes clear guidelines for the prevention and punishment of corruption.

S3: Collaboration between the public and private sectors is also essential to create an enabling environment for compliance, promoting a culture of transparency and accountability.

Weaknesses (Negative)

W1: A scheme must be manifested in several dimensions through the implementation of codes of conduct, anti-corruption policies, and continuous training programs for employees with the main functions performed within compliance in this area.

External variables

Opportunities (Positive)

O1: There are legal mechanisms at the state level that help implement compliance, these are:

- **Prevention**: It is a fundamental pillar of compliance that is achieved through the implementation of clear policies and procedures that establish the expected behaviors and the consequences of inappropriate actions.
- **Detection**: Crucial to minimizing the impact of corrupt acts is the use of data analysis software that can help detect unusual patterns in financial transactions that could indicate corrupt practices.
- **Investigation:** Once a possible act of corruption has been detected, it is essential to carry out a thorough investigation impartially and rigorously.
- **Sanctioning:** The imposition of appropriate sanctions is essential to deter future acts of corruption. In addition, organizations must cooperate with judicial authorities to ensure that corrupt acts are punished according to the law.
- **Remediation**: Remediation refers to corrective actions that are implemented to prevent the recurrence of corrupt acts.

O2: Compliance in Ecuador can be improved by adopting advanced technologies, such as blockchain, which is a mechanism that can revolutionize the way corrupt acts are monitored and detected.

O3: There is international cooperation in the exchange of best practices to strengthen local capacities to implement robust compliance programs.

Threats (Negative)

T1: There are corruption problems in the country, which has been involved in several international scandals for this reason.

T2: The main threat is resistance to change within public institutions, especially in sectors where corruption has been deeply rooted, such as justice and health.

T3: Lack of resources and adequate training can also limit the effectiveness of compliance programs.

As in [17], in this article, we summarize in Tables 2 and 3 the linguistic values associated with plithogenic numbers:

Table 2: Linguistic values associated with plithogenic numbers for the assessment. Source: [17, 18].

Linguistic Expression	Plitogenic number (T, I, F)
Very poor (VP)	$(0.10, 0.75, 0.85)$
Poor (P)	$(0.25, 0.60, 0.80)$
Moderately poor (MP)	$(0.40, 0.70, 0.50)$
Medium (M)	$(0.50, 0.40, 0.60)$
Moderately good (MG)	$(0.65, 0.30, 0.45)$
Good (G)	$(0.80, 0.10, 0.30)$
Very good (VG)	$(0.95, 0.05, 0.05)$

Table 3: Linguistic values associated with plithogenic numbers for the evaluation of the weight of the criteria. Source: [17, 18].

Linguistic Expression	Plitogenic number (T, I, F)
Low significance (LS)	$(0.10, 0.70, 0.80)$
Equal significance (ES)	$(0.30, 0.40, 0.80)$
Robust significance (RS)	$(0.50, 0.40, 0.60)$
Very robust significance (VRS)	$(0.70, 0.30, 0.10)$
Absolute significance (AS)	$(0.90, 0.10, 0.10)$

A group of five experts was hired, who evaluated the Strengths, Weaknesses, Opportunities, and Threats according to the scale that appears in Tables 2 and 3. The results of the associated plithogenic numbers are processed to obtain the balance in this method.

Each of the four aspects to be evaluated is located in a matrix, where the evaluations of the internal variables appear in rows and the evaluations of the external variables in columns.

To calculate the results of the aggregation by the 4 quadrants Strength-Opportunity (SO), Strength-Threat (ST), Weakness-Opportunity (WO), and Weakness-Threat (WT), equations 8, 9, 10, and 11 are used, respectively. In this article, no dominant aspect is differentiated for these formulas.

$$\mathrm{SO} = \bigwedge_{p_{i=1}}^{3} \bigwedge_{p_{j=1}}^{3} \left(\left(\omega_{o_i} \bigwedge_p \omega_{s_j} \right) \bigwedge_p E_{o_i s_j} \right) \qquad (8),$$

Where $\bigwedge_p$ is the plithogenic conjunction based on the minimum t-norm and the maximum t- conorm, Equation 6, ω_{o_i} is the weight given to the i-th opportunity, ω_{s_j} is the weight given to the j-th strength, $E_{o_i s_j}$ is the evaluation assigned to the intersection of the i-th opportunity with the j-th strength.

$$\mathrm{ST} = \bigwedge_{p_{i=1}}^{3} \bigwedge_{p_{j=1}}^{3} \left(\left(\omega_{T_i} \bigwedge_p \omega_{s_j} \right) \bigwedge_p E_{T_i s_j} \right) \qquad (9),$$

ω_{T_i} is the weight given to the i-th threat, $E_{T_i s_j}$ is the evaluation assigned to the intersection of the i-th threat with the j-th strength.

$$\mathrm{WO} = \bigwedge_p \bigwedge_{p_{j=1}}^{3} \left(\left(\omega_w \bigwedge_p \omega_{o_j} \right) \bigwedge_p E_{w o_j} \right) \qquad (10),$$

ω_w is the weight given to the weakness, $E_{w o_j}$ is the evaluation assigned to the intersection of the weakness with the j-th opportunity.

$$\mathrm{WT} = \bigwedge_p \bigwedge_{p_{j=1}}^{3} \left(\left(\omega_w \bigwedge_p \omega_{T_j} \right) \bigwedge_p E_{w T_j} \right) \qquad (11),$$

E_{wT_j} is the evaluation assigned to the intersection of the weakness with the j-th threat.

Table 3 contains the aggregated evaluation given by the five experts of the combination of the results of each internal variable value with each external variable value. The median was used for the aggregation. Note that we used the algorithm proposed in [17] to perform the evaluation.

Table 4: SWOT matrix of the aspects measured in plithogenic numbers. Source: The authors.

		Opportunities			**Threats**		
	.	**O1**	**O2**	**O3**	**T1**	**T2**	**T3**
Strengths	**S1**	(0.95, 0.05, 0.05)	(0.95, 0.05, 0.05)	(0.95, 0.05, 0.05)	(0.65, 0.30, 0.45)	(0.65, 0.30, 0.45)	(0.50, 0.40, 0.60)
	S2	(0.95, 0.05, 0.05)	(0.65, 0.30, 0.45)	(0.95, 0.05, 0.05)	(0.50, 0.40, 0.60)	(0.50, 0.40, 0.60)	(0.65, 0.30, 0.45)
	S3	(0.65, 0.30, 0.45)	(0.80, 0.10, 0.30)	(0.65, 0.30, 0.45)	(0.65, 0.30, 0.45)	(0.65, 0.30, 0.45)	(0.95, 0.05, 0.05)
Weaknesses	**W**	(0.95, 0.05, 0.05)	(0.95, 0.05, 0.05)	(0.95, 0.05, 0.05)	(0.65, 0.30, 0.45)	(0.50, 0.40, 0.60)	(0.50, 0.40, 0.60)

All variables were assigned the value of absolute significance weight or $(0.90, 0.10, 0.10)$, therefore the following result was obtained for the variable combinations:

$\mathrm{SO} = (0.65, 0.16328, 0.45)$, $\mathrm{ST} = (0.50, 0.14023, 0.60)$, $\mathrm{WO} = (0.90, 0.075, 0.10)$, and $\mathrm{WT} = (0.50, 0.23750, 0.60)$.

From these results, compared with the values in Table 2 and their linguistic values, it is inferred that the potentialities (SO) are "Moderately good", the limitations (WT) are "Medium", the risks (ST) are "Medium" and finally the challenges (WO) are between "Good" or "High" and "Very Good" or "Very High".

Conclusion

The implementation of compliance in the small-value procurement process not only strengthens transparency and integrity in public procurement but also promotes a culture of accountability and responsibility. By following the proposed steps and actions, public institutions can minimize corruption risks and ensure a more efficient and ethical use of public resources. The effective implementation of compliance programs not only helps combat corruption but also contributes to improving public trust in institutions, promoting a more ethical and sustainable business environment. Ultimately, compliance is an ethical concept that has become an indispensable tool for achieving a more efficient and responsible public administration, essential for the development and well-being of Ecuador.

This paper proposed a feasibility study to implement a compliance program in the current situation of Ecuador. To do so, we utilized SWOT analysis using plithogenic numbers, following the method applied in [17]. A group of five experts gave their opinion to carry out the required evaluation. A linguistic scale was used that facilitated the evaluation by the experts. The plithogenic theory allowed capturing the complexity of the dynamics of what is being studied. The final result was that the limitations and risks are "Medium", the potentialities are "Moderately Good" and the challenges are "High".

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