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## ANALYSIS

### OF MONEY LAUNDERING CRIMES THROUGH MULTI-CRITERIA DECISION METHODS

### ANÁLISIS DE LOS DELITOS DE BLANQUEO DE CAPITALES MEDIANTE MÉTODOS DE DECISIÓN MULTICRITERIO

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#### ABSTRACT

Money laundering is considered a transnational crime with a negative impact on economies. Most countries have established effective mechanisms for the prevention, detection, and eradication of this criminal phenomenon. Laundering assets, by its nature, promotes moral and social deterioration and corruption, with destabilizing movements in the economy of nations, in addition to the negative consequences on governance, increased social violence, illegal concentration of wealth, generation of inflationary effects, unfair competition, discredit of the financial system and capital markets, among other disastrous consequences for society. This study intends to analyze the treatment of money laundering and propose possible alternatives to mitigate the impact on economies. For the analysis of each alternative, in terms of scope and objective, the modeling of the AHP Saaty, MOORA, and Entropy methods should be used. The results obtained focus on preventing the legitimization of the benefits of criminal activities, and the accumulation and reinvestment of assets illegally obtained. To this end, work is being done to strengthen regulations and policies to control the origin of financial resources.

**Keywords:** Money laundering, law, AHP Saaty, MOORA, Entropy

#### RESUMEN

El blanqueo de capitales se considera un delito transnacional con un impacto negativo en las economías. La mayoría de los países han establecido mecanismos eficaces para la prevención, detección y erradicación de este fenómeno delictivo. El lavado de activos, por su naturaleza, promueve el deterioro moral y social y la corrupción, con movimientos desestabilizadores en la economía de las naciones, además de las consecuencias negativas en la gobernabilidad, el aumento de la violencia social, la concentración ilegal de la riqueza, la generación de efectos inflacionarios, la competencia desleal, el descrédito del sistema financiero y de los mercados de capitales, entre otras consecuencias desastrosas para la sociedad. Este estudio pretende analizar el tratamiento del lavado de dinero y proponer posibles alternativas para mitigar el impacto en las economías. Para el análisis de cada alternativa, en cuanto a su alcance y objetivo, se utilizará la modelización de los métodos AHP Saaty, MOORA y Entropía. Los resultados obtenidos se centran en evitar la legitimación de los beneficios de las actividades delictivas, y la acumulación y reinversión de los bienes obtenidos ilegalmente. Para ello, se está trabajando en el fortalecimiento de las regulaciones y políticas de control del origen de los recursos financieros.

**Palabras clave:** Lavado de dinero, ley, AHP Saaty, MOORA, Entropía

## INTRODUCTION

Money laundering or asset laundering is understood as the set of activities and procedures articulated for the execution of combined real and artificial operations that conclude in the legalization of capital whose origin is illicit. It is fulfilled within a complex process in which the specific objective that moves the money laundering activity is highlighted, which is to move that money through the financial and commercial system to insert it into the regular economy of a country. In such a way that it is impossible to trace it, to finally put it beyond the reach of the controls of the law and the corresponding organisms (Rusanov & Pudovochkin, 2021).

It is stated that it is the surreptitious, clandestine and spurious procedure through which the funds or profits from illicit activities (weaponry, prostitution, white slavery, common, economic, political, and related crimes, smuggling, tax evasion, drug trafficking) (Hannah-Moffat, 2019). This cash is recycled to the normal circuit of capital or goods and then profited by schemes as heterogeneous as they are tactically skillful.

Crimes against property, especially the Ecuadorian Penal Code. The crime of money laundering is part of the current Economic Criminal Law, present in modern societies, where it has caused enormous damage to the point of affecting the general economy of the State. Precisely for this reason, it is safe to say that the ultimate goal of the money laundering process is to integrate illicit capital into the general economy and transform it into legal goods and services for the legal community (Buele et al, 2019).

For this purpose, it must be fulfilled in a meticulous and complex manner, by not leaving any trace that denotes the illegality of the business and guarantees the security sought by the active subjects of these conducts. Actions that start from the field of economic-financial transactions, but have very varied legal and illegal links. To achieve this, they allow the identification of different "stages of the process" leading to giving the appearance of legality to money laundered, within which, in general terms, the following have been identified (Bhattacharjee et al, 2019; von Feigenblatt et al, 2021):

- Placement. It occurs when large amounts of cash are handled and enter the financial environment divided into small sums that are deposited in cash. The way to exchange them with other financial instruments that can be negotiated with relative ease is sought. Fractionation is intended to avoid controls on large operations.

- Stratification or diversification. It is given by a series of more or less complicated financial operations. They intend to decouple the money from its origin in such a way that all traces are erased and seek to complicate the monitoring of operations by control agencies.
- Integration. It occurs when money returns to circulate without problem with all the appearance of legality, in such a way that it is very difficult to separate what is legal from what is illegal.

There are a series of regulations to control, regulate and dictate sanctions for criminal behavior. Money or asset laundering is typified in Ecuadorian legislation and is closely related to other crimes. An example is drug trafficking and related behaviors typified in the Penal Code. Among other observations, the laundering of money from drug trafficking is not exclusively repressed in the Law on Narcotic and Psychotropic Substances, but also in other legal provisions, some of an administrative nature, such as those emanating from the Superintendence of Banks (Buele et al, 2019; Arrias et al, 2021).

Among the most common acts of money laundering is the illicit activity of drug trafficking. Therefore, the highest authorities focus on repressing illicit enrichment with money from drug trafficking and related activities. Among them, figure heading is curbed to acquire goods with resources that come from drug trafficking (Buele et al, 2019). These are not the only legal provisions of Ecuadorian legislation related to money laundering. Some provisions are part of the Ecuadorian legal order in which other references are little known. Although its diffusion is certainly wide in banking and financial circles. It is noted that some of these provisions could give rise to criminal liability for commission or omission, commission by omission, originating from the breach of administrative, executive, or management obligations, when not from co-authorship, complicity, or cover-up.

To achieve a reduction in the levels of money laundering, this study aims to analyze the treatment of money laundering and propose possible alternatives aimed at mitigating the impact on economies. The following are set out as specific objectives:

- Factors that give rise to an environment of corruption and money laundering
- Goals to achieve a political and legal structure for the prevention of money laundering
- The effects found as a result of money laundering
- Propose the alternative(s) with the highest ranking in the solution of the study

## MATERIALS AND METHODS

### Analytic Hierarchy Process

The Analytic Hierarchy Process (AHP Saaty) was proposed by Thomas Saaty in 1980. It is one of the most widespread methods for solving multi-criteria decision-making problems. For the consultation of the method see (Mu, 2022; Saaty, 2008). The simplified methodology used in this research is presented below:

1. Carry out surveys for the prioritization of the elements and their binary comparison
2. Evaluate elements by assigning weights
3. Establish a ranking of alternatives and sensitivity analysis.

### Method Multi-Objective Optimization by Ratio Analysis (MOORA)

The method was introduced by Brauers and Zavadskas (Brauers et al, 2008). The basic idea of this procedure is to calculate the global return of each alternative as the difference between the sums of its normalized returns that belong to the cost and benefit criteria. Before starting, it is important to have all the attributes well defined and to consider that all of these must be measurable, that is, that they can be measured or valued with respect to each of the alternatives. Next, the procedure for the implementation of the mentioned method will be described in detail.

1. Final Decision Matrix Approach: The method begins with the identification of available alternatives and criteria. Then, the decision-making matrix is constructed, containing  $n$  rows representing the alternatives in the evaluation and  $J+L$  the columns that represent the criteria under evaluation ( $J$  quantitative criteria and  $L$  qualitative criteria). In this way, the final decision matrix (FDM) is calculated using equation (1).
- 2.

$$FDM = [VO, VST] \begin{bmatrix} A^1 \\ A^2 \\ \vdots \\ A^n \end{bmatrix} \begin{bmatrix} x_1^1 & \cdots & x_j^1 & x_{j+1}^1 & \cdots & x_{j+L}^1 \\ x_1^2 & \cdots & x_j^2 & x_{j+1}^2 & \cdots & x_{j+L}^2 \\ \vdots & \vdots & \vdots & \vdots & \vdots & \vdots \\ x_1^n & \cdots & x_j^n & x_{j+1}^n & \cdots & x_{j+L}^n \end{bmatrix} \quad (1)$$

Where represent the alternatives, for and represents the inputs of alternative  $i$  with respect to criterion  $j$ .

3. Calculate the normalized decision matrix: The rating criteria may be expressed in various units or scales of measurement; so, normalization is carried out. Where the Euclidean norm is obtained according to equation (2) to the criterion  $x_j$ .

$$|X_j| = \sqrt{\sum_1^n x_i^2} \quad (2)$$

Therefore, the normalization of each entry in the FDM is carried out according to equation (3).

$$Nx_{ij} = \frac{x_{ij}}{|X_j|} \quad (3)$$

The results obtained using equation (6) are dimensionless values that lack scale, which allows the operations between the criteria to be additive.

4. Calculate the weighted normalized decision matrix: Taking into account the different importance of the criteria, the normalized weighted scores are calculated with equation (4).

$$WNx_{ij} = w_i \cdot Nx_{ij} \quad (4)$$

5. Selection of alternatives by distance to reference point when using Tchebycheff. The reference point or alternative is constructed  $R[r_j]$ . This benchmark is built with the best evaluation for each criterion.

6. To measure the distance between each alternative and the reference point, the Tchebycheff metric (5) is used.

$$Dist_{(ij)} = \{ \max_j | r_j - WNx_{ij} | \} \quad (5)$$

7. The alternatives are ordered according to the smallest distance (6).

$$\min_i = \{ \max_j | r_j - WNx_{ij} | \} \quad (6)$$

8. Scales for modeling

- $F1 \in \{900; 1800\}$
- $F2 \in \{1.5; 8.0\}$
- $F3 \in \{1.5; 3.0\}$
- $F4 \in \{600; 8000\}$
- $F5 \in \{2800; 6000\}$
- $F6 \in \{2.0; 4.0\}$

### Entropy Method

This method was proposed by Zeleny in 1982. It is based on the assumption that the relative importance of a criterion must be proportional to the amount of information intrinsically provided by the set of alternatives with respect to that criterion. Entropy measures the uncertainty in the information formulated using probability theory. Indicates that a broad distribution represents more uncertainty than a distribution with sharp peaks (Saqlain et al, 2020).

The greater diversity there is in the evaluations (values) of the alternatives, the greater importance this criterion should have in the final decision since it has greater power of discrimination between the alternatives. The method measures the diversity of a criterion, through entropy. The calculated entropy is higher the more similar the evaluations of the considered alternatives are. The entropy method is calculated in the following steps:

Step 1. Construction of the decision matrix.

Step 2. Calculation of the normalized decision matrix, the objective of normalization is to obtain dimensionless

values of different criteria to make comparisons between them. It is calculated using Equation (7).

$$P_{ij} = \frac{x_{ij}}{\sum_{i=1}^m x_{ij}} \quad (7)$$

Step 3. Calculation of entropy, using Equation (8)

$$E_j = -k \left( \sum_{i=1}^m P_{ij} \ln(p_{ij}) \right) \quad (8)$$

Where:

$t=1,2,3,\dots,n$

$k = \frac{1}{\ln m}$  is a constant that guarantees  $0 \leq E_j \leq 1$  and  $m$  is the number of alternatives.

Step 4. Calculation of the criterion diversity  $D_j$ , Equation (9) allows calculating this parameter.

$$D_j = 1 - E_j \quad (9)$$

Step 5. Calculation of the normalized weight of each criterion  $W_j$ , through Equation (10).

$$W_j = \frac{D_j}{\sum_{i=1}^m D_j} \quad (10)$$

Scales for evaluating the impact of the element according to the expert:

- $E1 \in \{2770; 8000\}$
- $E2 \in \{0.60; 28.0\}$
- $E3 \in \{88; 205\}$
- $E4 \in \{149; 898\}$
- $E5 \in \{0.20; 0.4\}$
- $E6 \in \{200; 700\}$

## DISCUSSION AND RESULTS

### Stage I

For the first stage, it is desired to visualize the factors that influence an environment of money laundering and the possible strategies to apply. To determine the factors that have a level of incidence in this type of crime from the modeling of the AHP Saaty method. Tables 1, 2 &3, and for the strategies to apply the use of the MOORA method. For this, the following references were used (Hannah-Moffat, 2019; Arrias et al, 2021).

Table 1: Factors that originate an environment of corruption and money laundering. Source: own elaboration.

<b>F1</b>	Little control in the face of the financial crisis	Increase of the informal economy, illegal activities, and money laundering from the global financial crisis.
<b>F2</b>	Little currency control and the demand for the dollar	Little controls on foreign exchange imposed by some governments in the region, they result in greater use of cash in financial transactions, thus favoring money laundering schemes based on the exchange of cash in the informal economy.
<b>F3</b>	Increase in organized crime	Increase in high rates of violence and criminal activities related to organized crime in Latin America.
<b>F4</b>	Low monitoring of corruption	Payment of bribes to public officials and people with institutional positions. Increase in inadequate know-your-customer practices
<b>F5</b>	Low monitoring of drug trafficking	The proliferation of international threats such as terrorism, or drug trafficking. The creation of companies in tax havens and electronic transfers of large sums of money result in values corresponding to accounting fraud by the high command of an institution.
<b>F6</b>	Deficient political and legal structure against money laundering	Loss of a political and legal structure for the control and monitoring of financial flows

Table 2: Normalized matrix. Source: own elaboration

Criteria	F1	F2	F3	F4	F5	F6	Weight
<b>F1</b>	0.06	0.02	0.02	0.05	0.08	0.06	0.05
<b>F2</b>	0.06	0.07	0.17	0.03	0.08	0.17	0.10
<b>F3</b>	0.06	0.02	0.06	0.03	0.08	0.17	0.07
<b>F4</b>	0.31	0.34	0.29	0.14	0.11	0.17	0.23
<b>F5</b>	0.06	0.07	0.06	0.03	0.08	0.06	0.06
<b>F6</b>	0.44	0.48	0.40	0.72	0.56	0.39	0.50

Table 3: Exercise consistency analysis. Source: own elaboration

Criteria	Approximate eigenvalues
F1	6.434865777
F2	6.479393302
F3	6.043612176
F4	7.024084315
F5	6.626324031
F6	7.119387073
Eigenvalue= 6.62128 Consistency ratio=0.10<0.10 Therefore, consistent	

Once the weights are calculated, the predominant factor is the deficient political and legal structure against money laundering. To minimize the effects of this factor, strategies must be evaluated to obtain a political and legal structure that is capable of preventing and confronting money laundering. Therefore, the experts determine 6 alternatives to evaluate for the analyzed factors and determine the resulting weight. It is decided to use the Moore method.

## MOORA

The prevention and control of assets is a vital tool in the regulatory process that involves different sectors: citizen, business, financial and regulatory in Ecuador. To visualize the alternatives, it was decided to simulate by the MOORA method, Tables 4-8.

Table 4: Goals to achieve a political and legal structure for the prevention of money laundering. Source: own elaboration

<b>A1</b>	Have legal and regulatory structures established by the government authority
<b>A2</b>	Have policies, institutional objectives, and procedures to which the reporting entities and other institutions related to the anti-money laundering process commit themselves.
<b>A3</b>	Update audit processes, preventive intelligence, and an effective internal compliance function in entities.
<b>A4</b>	Implement the correct analytical controls and procedures for the review of operations.
<b>A 5</b>	Redesign well-defined organizational structures to implement and maintain these policies and procedures within the reporting entities and other institutions.
<b>A6</b>	Carry out training and continuous awareness at the appropriate levels, for organizations, especially in the obligated subjects.

Table 5: Final decision matrix. Source: own elaboration

	<b>F1</b>	<b>F2</b>	<b>F3</b>	<b>F4</b>	<b>F5</b>	<b>F6</b>
<b>Unit</b>	<b>Transfer/h</b>	<b>t/event</b>	<b>Reg. avg/d</b>	<b>M.USD</b>	<b>Qualified person</b>	<b>category / expert</b>
<b>Alternatives</b>	<b>Max</b>	<b>Max</b>	<b>min</b>	<b>Max</b>	<b>Max</b>	<b>Max</b>
A1	1,500	4.0	2.5	8000	3500	3.5
A2	900	3.5	2.0	500	3000	2.6
A3	1,600	6.0	2.8	900	4000	2.8
A4	1,000	1.6	1.7	600	2800	2.0
A 5	1,800	8.0	3.0	1000	6000	4.0
A6	1,000	1.5	1.5	700	5000	3.0
Sum of squares	10,860,000	133	32	66,910,000	106,090,000	56
root of squares	3,295.45	11.54	5.68	8,179.85	10,300.00	7.47

Table 6: Normalized matrix. Source: own elaboration

	<b>F1</b>	<b>F2</b>	<b>F3</b>	<b>F4</b>	<b>F5</b>	<b>F6</b>
	<b>Transfer/h</b>	<b>t/event</b>	<b>Reg. avg/d</b>	<b>PM</b>	<b>Qualified person</b>	<b>category/expert</b>
Alternatives	Max	Max	min	Max	Max	Max
A1	0.455	0.347	0.440	0.978	0.340	0.468
A2	0.273	0.303	0.352	0.061	0.291	0.348
A3	0.486	0.520	0.493	0.110	0.388	0.375
A4	0.303	0.139	0.299	0.073	0.272	0.268
A 5	0.546	0.694	0.528	0.122	0.583	0.535
A6	0.303	0.130	0.264	0.086	0.485	0.401
w	0.15	0.52	0.35	0.20	0.40	0.10

Table 7: Normalized and weighted matrix. Source: own elaboration

	<b>F1</b>	<b>F2</b>	<b>F3</b>	<b>F4</b>	<b>F5</b>	<b>F6</b>
<b>Alternatives</b>	<b>min</b>	<b>Max</b>	<b>Max</b>	<b>Max</b>	<b>Max</b>	<b>Max</b>
A1	0.068	0.180	0.154	0.196	0.136	0.047
A2	0.041	0.158	0.123	0.012	0.116	0.035
A3	0.073	0.270	0.173	0.022	0.155	0.038
A4	0.046	0.072	0.105	0.015	0.109	0.027
TO 5	0.082	0.361	0.185	0.024	0.233	0.054

A6	0.046	0.068	0.092	0.017	0.194	0.040
	0.041	0.361	0.185	0.196	0.233	0.054

Table 8: Evaluation of each alternative by distance to reference point. Source: own elaboration

							Max	Order
A1	0.027	0.181	0.031	0.000	0.097	0.007	0.181	3
A2	0.000	0.203	0.062	0.184	0.117	0.019	0.203	4
A3	0.032	0.091	0.012	0.174	0.078	0.016	0.174	2
A4	0.005	0.289	0.080	0.181	0.124	0.027	0.289	5
TO 5	0.041	0.000	0.000	0.172	0.000	0.000	0.172	1
A6	0.005	0.293	0.093	0.179	0.039	0.014	0.293	6

From the ideal reference point, it is decided to use the alternative:

- Redesign well-defined organizational structures to implement and maintain these policies and procedures within the reporting entities and other institutions and;
- Update audit processes, preventive intelligence, and an effective internal compliance function in entities.

The modeling leads to the control approach to money laundering. This requires redesigning the current structure and updating the audit processes for the control of money laundering in entities. The restructuring of the control structures and monitoring of financial flows must be framed by providing a solution to the consequences generated. For them, it was decided to apply Saaty's AHP again in a second stage.

## Stage II

Saaty's AHP

To define which affectations have a marked influence on the economy and with repercussions on society, it is decided to repeat the AHP Saaty method based on the following criteria. Tables 9-11:

Table 9: The effects found as a result of money laundering. Source: own elaboration

<b>E1</b>	Price Impact	market destabilization	The introduction of illicit money as if it were legitimate causes delirium in price stability; since the organizations involved in money laundering have capital that gives them an advantage over those that are legitimate. In addition, there are also changes in the value of assets in secondary markets, which encourages speculative operations. Another consequence is the volatility of the exchange rate and the interest rate.
<b>E2</b>	Impact of fraud	Involvement and increase in corruption.	Criminal organizations have sophisticated their way of operating. One of the most common is the use of "front" companies, that is, organizations that voluntarily or involuntarily lend themselves through bribery or fraud as accomplices in money laundering. In the vast majority of cases, organizations that agree to being "front" organizations continue with the money laundering process and end up paying the legal consequences, even though they may not have initially thought of being involved in this crime.
<b>E3</b>	Inflation	Inflation in the real estate sector	If the laundered money is invested in the massive acquisition of houses, then there is a falsified increase in the prices of the houses in a country, this prevents national buyers from acquiring a house. This happens in the same way in all types of investments in services, for example, sectors such as the hotel industry can have great growth due to illicit investments, but once this means "is no longer useful" in money laundering, it is abandoned and causes destabilization in the whole sector.
<b>E4</b>	Political assessment	Political corruption	Developing countries and countries seeking foreign investment are more at risk of being easy targets for criminal money laundering networks, especially when their governments are corrupt and involved in this illicit activity.

<b>E5</b>	Investor-client trust	Distrust and panic of investors and institutional clients	The consequences on the reputation and integrity, extremely valuable assets, can cause mistrust and panic among investors and clients of the institutions. This translates into: the loss of profitable businesses, liquidity problems, cessation of correspondent banking services, and asset seizures, among others that cause a collapse of the banking and financial system.
<b>E6</b>	Financial weakness	Weakening in the financial system and the banking system	Financial and banking institutions that engage in money laundering harm the economy and financial stability of a country. The consequences on the reputation and integrity, extremely valuable assets, can cause mistrust and panic among investors and clients of the institutions. This translates into the loss of profitable businesses, liquidity problems, cessation of correspondent banking services, and asset seizures, among others that cause a collapse of the banking and financial system.

Table 10: Normalized matrix. Source: own elaboration

Criteria	F1	F2	F3	F4	F5	F6	Weight
<b>F1</b>	0.06	0.07	0.06	0.03	0.08	0.07	0.06
<b>F2</b>	0.06	0.07	0.19	0.03	0.08	0.21	0.11
<b>F3</b>	0.06	0.02	0.06	0.03	0.11	0.07	0.06
<b>F4</b>	0.31	0.34	0.31	0.14	0.11	0.21	0.24
<b>F5</b>	0.44	0.48	0.31	0.72	0.53	0.36	0.47
<b>F6</b>	0.06	0.02	0.06	0.05	0.11	0.07	0.06

Table 11: Exercise consistency analysis. Source: own elaboration

Criteria	Approximate eigenvalues	<b>Eigenvalue= 6.54833</b> <b>CI=0.11</b> <b>CR=0.09&lt;0.10</b> <b>Consistent</b>
<b>E1</b>	6.56763408	
<b>E2</b>	6.089703645	
<b>E3</b>	6.106826554	
<b>E4</b>	6.934202409	
<b>E5</b>	7.28843811	
<b>E6</b>	6.303166815	

Once the weights have been calculated, the predominant effect is the distrust and panic of investors and institutional clients. To reverse this effect, the strategies with the best results must be evaluated, therefore, the experts determine 8 criteria be evaluated in this dimension and determine the resulting weight. It is decided to repeat the Entropy method to the criteria. The candidate materials and the criteria under analysis are shown in table 12.

Table 12: Alternatives to evaluate with the entropy method. Source: own elaboration

<b>A7</b>	Criminalize the financing of terrorism
<b>A8</b>	Apply mechanisms that allow timely actions to freeze
<b>A9</b>	Seize or confiscate assets or property derived from terrorist activities (Ping, 2008)
<b>A10</b>	Reform the Law to Suppress Money Laundering
<b>A11</b>	Strengthen supervision over the financial and private insurance sector

The entropy method is applied for the weighting criteria based on the evaluation criteria by experts, to obtain objective weights at the time of the evaluation. Table 15.

Table 13: Evaluation matrix. Source: own elaboration

Alternatives	Price Impact	Impact of fraud	Inflation	Political assessment	Investor-client trust	Financial weakness
	(Scale)	(Scale)	(Scale)	(Scale)	(Scale)	(Scale)
	<b>E1</b>	<b>E2</b>	<b>E3</b>	<b>E4</b>	<b>E5</b>	<b>E6</b>
<b>A7</b>	4430	27.5	115	898	0.349	620
<b>A8</b>	2770	8.29	88	358	0.32	372
<b>A9</b>	7980	4.53	205	310	0.275	620
<b>A10</b>	7150	0.67	173	339	0.28	500
<b>A11</b>	7200	0.67	120	149	0.265	250

Table 14 shows the normalized decision matrix of the entropy method.

Table 14: Normalized Decision Matrix. Source: own elaboration

Price Impact	Impact of fraud	Inflation	Political assessment	Investor-client trust	Financial weakness
0.150	0.660	0.164	0.437	0.234	0.262
0.094	0.199	0.126	0.174	0.215	0.157
0.270	0.109	0.292	0.151	0.185	0.262
0.242	0.016	0.247	0.165	0.188	0.212
0.244	0.016	0.171	0.073	0.178	0.106

The entropy values of each variable, the criterion diversity ( $E_j$ ) and the normalized weights of each criterion ( $D_j$ ) are indicated in Table 15, according to equations (2), (3), and (4) respectively.

Table 15: Calculation of according to the entropy method. Source: own elaboration

Criteria	$E_j$	$D_j$	$W_j$	Order
Price Impact	0.962	0.038	0.038	2
Impact of fraud	0.602	0.398	0.400	1
Inflation	0.972	0.028	0.028	3
Political assessment	0.895	0.105	0.106	4
Investor-client trust	0.997	0.003	0.003	6
Financial weakness	0.969	0.031	0.031	5

It is defined to focus on the alternatives based on mitigating the impact of the fraud that is committed in the crime of money laundering. Figure 1

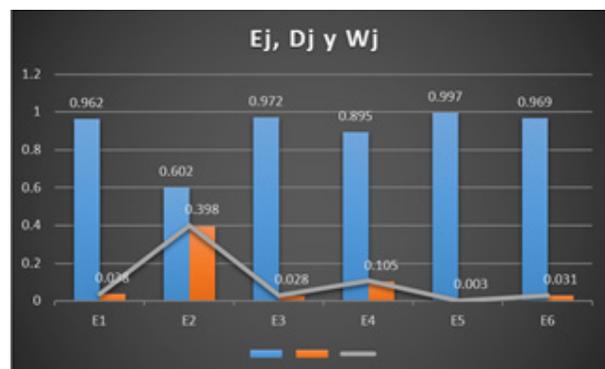


Figure 1: Graphic representation of  $E_j, D_j$  and  $W_j$ . Source: own elaboration

Officials and auditors are responsible for ordering, reviewing, and executing a transaction in any area of the institution that equals or exceeds the minimums established by regulation, or its equivalent in other currencies. In addition to including the existence of economic fraud in institutions. For a criminal type not to be illegitimate, it is necessary that each one complies with the principle of harmfulness, nor that it violates or endangers a legal right. For this reason, it is necessary to determine which is the legal right that damages the activity of control of financial assets.

## CONCLUSIONS

Asset laundering or money laundering is a criminal type that requires a judicial process. To disguise physical money and introduce it into the licit financial system of a State, stages are required. This process is made up of the placement phase, then the conversion phase which directly uses financial transactions with the support of technological advances, and finally the integration phase. The latter consists of allocating illicit assets to the acquisition of negotiable goods or services.

The international instruments regarding money laundering must have as their purpose to protect the financial entities of each country. Therefore, it is necessary to extend their regulation to the regulatory scope of each State. Analyzing the crime of laundering financial resources goes beyond drug trafficking activity. For them, all activities that generate capital of illicit origin must be taken into account. Ecuador must strive to implement regulations and mechanisms to combat money laundering.

Society experiences an evolution at all times, in terms of its technological advances, which allows financial systems to be much more vulnerable so that the sanction of money-laundering behavior becomes essential for legal systems. Therefore, it is vital to redesign well-defined organizational structures to implement and maintain these policies and procedures within reporting entities and other institutions and to update audit processes, preventive intelligence, and an effective internal compliance function in entities.

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