



# Neutrosophic Iadov for the analysis of satisfaction on the regularities in the international legal field concerning the human rights of migrant workers in Ecuador

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**Abstract.** Legal norms regulate the situation of migrants. At international level, however, they are primarily responsible for establishing fundamental human rights, but the normative development of both the United Nations and the ILO focuses primarily on analyzing the situation of migrant workers in regular status, which leaves aside the situation of irregular migrant workers. The method of document content analysis was used to review and assess various sources, studies and legal documents. In the same way, the analytical-synthetic method is used, which makes it possible to integrate the most important normative and jurisprudential sources. In order to support the validation, the IADOV method and the neutrosophic logic were applied for the analysis of satisfaction on the irregularities in the international legal field related to the human rights of migrant workers in Ecuador.

**Keywords:** Migration, legislation, Irregularity, discrimination, equality, IADOV , neutrosophic logic

## 1 Introduction

The United Nations Convention on the Protection of the Rights of All Migrant Workers and their Families, adopted by the General Assembly of the United Nations in its resolution 45/158 of December 18, 1990 makes reference in its introductory headings to the new reality of the migratory phenomenon. The norm, in that section, points out the need to adopt measures to "prevent and dissuade" irregular immigration by recognizing the fundamental human rights of migrant workers. At the same time, this legal norm in its 1<sup>st</sup> article defines the concept of migrant worker and in this respect establishes that it is "any person who is going to carry out, carries out or has carried out a remunerated activity in a State of which he is not a national"[1].

The mentioned convention establishes that although all migrants have a common characteristic (living and working in a country of which they are not nationals) they also face other problems, among which stands out that having to form part of a society that is not their own, could discriminate against them in accordance with this "migrants are a highly vulnerable group. They often suffer from various forms of exploitation and serious abuses of their human rights and dignity".

This legal consecration for the academic world involves analyzing several questions. First of all, the norm recognizes this right for all migrants, but it must be taken into account that these people can have two specific conditions: to be in a regular situation or not. Thus, the norm establishes that this factor does not influence fundamental human rights, and that they must be respected, but, in addition, the convention states that legal migrants did benefit from the legitimacy of claiming more rights than undocumented migrants. However, we cannot fail to say that this consecration of the fundamental human rights of all migrants marks a milestone in the history of this collective and in this regard, it points to a sector of the doctrine that is a consequence of the work of the UN in recognizing the sensitive situation of these people through the protection and assurance of their fundamental human rights [2].

It is necessary to analyze this reality in greater depth, given that this recognition, in the case of the situation of migrants is essential, considering that migrants are people who are already at risk of being socially excluded by the receiving State from the point of view of its members. Seen in this way, this enshrinement of fundamental human rights is "a radically necessary instrument in the fight against the same (discrimination) for these people" [3].

The cited author refers that universality is "drastically reduced by the state or national policies on them and their constitutional particularization as a fundamental right of nationals, which generates a technical legal limitation of its universality.

The normative enshrinement is complemented by the New York Declaration for refugees and migrants number 70/1 of September 19, 2016 that in its paragraph II on the commitments that apply to both refugees and migrants. Specifically in its normative provision number 23 seeks to ensure the effective protection of the human rights of all migrant workers (regardless of their regular or irregular status).

In this regard, the establishment of some measures that allow the protection of these people is placed as a commitment for the current year 2018. Among them, it is specifically established the need to include these policies that we mention here in a future Global Pact for safe and orderly migration and to regulate this according to section number 1 on the commitments, in its normative disposition number 21.

The normative regulation as it is pointed out by a sector of the doctrine [2] in the work of the ILO highlights certain standards namely. One of them of special importance would be Convention No. 97 of 1949 concerning Migrant Workers. Which entered into force on January 22, 1952, and which establishes in its Article 6 that all States Parties shall apply to all immigrants without any type of discrimination treatment no less favorable than those who apply to nationals, and in this way equal remuneration should also be applied where the norm expressly mentions women in that normative provision.

Thus, with regard to Convention 97 in commentary we can say that, in its regulatory provision number 6, it establishes that each Member State is obliged to apply to migrants in a regular situation equal treatment to nationals without any discrimination on any grounds such as race, religion or sex. In addition, at the time of its application the ILO has pointed out that there are tangible inequalities suffered specifically in relation to working conditions, remuneration and social security. The organization notes, for example, that this has been happening in countries such as China, France, Norway and Israel. It is striking that the legislator mentions exclusively for the applications of favourable treatment to migrants in a regular situation, since, in this way, the ILO makes it clear that it will continue with the same "guarantee" parameter of the United Nations. [4]

In another sense, in 1978 the Convention number 143 was adopted on migration in abusive conditions and the promotion of equality of opportunities and treatment of migrant workers, which entered into force on December 9, 1978. The doctrine recognizes from this rule that because it deals with these two issues, it is thus divided into these "two substantive parts" [5]. It is a legal norm that in principle effectively promotes the rights of workers and especially of workers in a regular situation. With regard to the first commentary, it states in Article 1 that "Each Member for which this Convention is in force undertakes to respect the fundamental human rights of all migrant workers". A doctrinal commentary [3] that is considered prudent at this time and in relation to the Convention points out that these "fundamental human rights" are not specified in the Convention.

Thus, it is possible to mention Article 2, which establishes that it is the obligation of Member States to determine whether irregular migrant workers are found within their territories, in order to promote the regulation of the administrative situation of these persons and to eradicate trafficking of human beings. According to the article, it must be determined whether there are movements of migrants in the territory of these Member States with the purpose of working, and at the same time it must be analyzed whether these persons are subjected during their trip, arrival or stay to any type of circumstance that violates the international instruments or other agreements that may be established on this matter.

The doctrine points out in this section that the most relevant part of this first part of the norm is the fight against the illegal employment of migrants "but beyond that, the persecution of irregular work" [3]. Thus, like the doctrine in commentary, we believe that the regulation of migrants tends to set aside what he calls "other situations that migrants may suffer without authorization to reside in the country and that we complement by saying that they leave aside their social rights, a collective responsibility that is derived from social progress, with the declaration of nature as a subject of law in Ecuador being upheld in a new paradigm of South American legal sciences [4], of which we will fully discuss in this chapter".

With respect to this regular migration of persons, article 9 deals with this issue, stating that in the case of migrants in an irregular situation "Without prejudice to the measures adopted to control migratory movements for the purpose of employment", they must enjoy the same equality of treatment with respect to questions relating to remuneration, social security and other benefits corresponding to their previous employment, when this regulation has not been respected or when their situation cannot be regularized, since for [5] it is stable that these elements are those that later allow the understanding of the different achievements of the human being.

It is also of interest that, in relation to the irregular situation of these workers, Article 3 of the regulations stipulates that Member States shall adopt the necessary and appropriate measures relating to the scope of their own jurisdiction for the purpose of two fundamental questions: to suppress irregular or clandestine migration for the purpose of employment, or even the illegal employment of migrants, and to combat such persons or organizations of illegal movements for the purpose of employment coming from, going through or transiting their territory. The norm again refers to migrant workers in an irregular condition because, as has been said, it extends equal treatment to some fundamental issues in the world of work such as remuneration or social security. However, the same criterion that has been used for its ulterior purpose is therefore the eradication of this administrative status.

The work of the ILO is not limited only to this type of standards analyzed. In fact, in 2005 it adopted the Multilateral Framework for Labour Migration, which sets out some guidelines to be followed by the member States of the organization. Doctrine [4], in accordance with the comments we made on Convention 143, indicates that this framework in Principle 8 established as it does that "all migrant workers should enjoy the principles and rights contained in the ILO Declaration and in the relevant United Nations Conventions on Human Rights". Therefore, the doctrine concludes that this framework concretizes those rights mentioned in Convention 143, analyzed previously.

Considering the aforementioned, the question arises as to whether the irregularities in international human rights law have an impact on migrant workers in Ecuador.

For this reason, international human rights law irregularities are validated using Iadov's technique and neutrosophic logic, [6] techniques that are an indirect way of measuring the reversal of the burden of proof over the non-existence of untimely dismissal.

This technique uses, as stated in the original method, the related criteria of answers to interspersed questions whose relationship is unknown to the subject. At the same time, the unrelated or complementary questions serve as an introduction and support of objectivity to the respondent who uses them to locate himself and contrast the answers.

The result of these questions interacts through what is called "Iadov's Logical Chart", in this work the satisfaction of the respondents is combined with the introduction of the neutrosophic estimation to seek a solution to the problems of indetermination that appear universally in the evaluations of the surveys and other instruments, taking advantage not only of the found and opposite positions but also of the neutral or ambiguous ones. Starting from the fact that every idea  $< A >$  tends to be neutralized, diminished, balanced by the ideas, in clear rupture with the binary doctrines in the explanation and comprehension of the phenomena.

## 2 Methods

This research was developed under the method of documentary analysis of content, which allowed the review and assessment of all types of sources and doctrinal and legal documents that referred to the topic of study. This is how the analytical-synthetic method was used, which allowed that through the analysis of this type of sources an integration of the most important could be made in order to comply with the general and specific objects of this research. That is why all the information contained in this research is the result of the analysis and legal study of normative documents combined with their doctrinal analysis. Another of the techniques used was the survey, for the development of which a sample of 21 subjects was considered. The survey was elaborated with 7 questions, three closed-ended questions interspersed in four open-ended questions; of which 1 fulfilled the introductory function and three functioned as a reaffirmation and support of objectivity to the respondent.

The questionnaire used in the survey was useful to measure whether the irregularities in the international legal sphere relating to human rights affect migrant workers in Ecuador, to anticipate, design and measure the impact of the problem, five questions were taken into account, of which three were closed and two were open. The three closed-ended questions correspond to the "Iadov Logical Chart", which is presented adapted to this research and shown in Table 1.

5. Does the application of the analysis to measure whether irregularities in international human rights law affect migrant workers in Ecuador meet your expectations?	Would it be appropriate to dispense with irregularities in the international legal sphere relating to human rights in Ecuador?									
	No			I don't know				Yes		
	Yes	I don't know	No	Yes	I don't know	No	Yes	I don't know	No	
Very satisfied.	1	2	6	2	2	6	6	6	6	
Partially satisfied.	2	2	3	2	3	3	6	3	6	
I don't care.	3	3	3	3	3	3	3	3	3	
More unsatisfied than satisfied.	6	3	6	3	4	4	3	4	4	
Not at all satisfied.	6	6	6	6	4	4	6	4	5	
<b>I don't know what to say.</b>	2	3	6	3	3	3	6	3	4	

**Table 1:** V.A. Iadov's logical chart to measure irregularities in the international legal field related to human rights. Source: Prepared by V.A. Iadov

The number resulting from the interrelation of the three questions indicates the position of each respondent in the satisfaction scale, that is, their individual satisfaction. This satisfaction scale is expressed by SVN numbers. The original definition of truth value in neutrosophic logic is shown below [7].

Let  $N = \{(T,I,F): T,I,F \subseteq [0,1]\}$  n, a neutrosophic valuation is a mapping of a group of propositional formulas to N, and for each sentence p we have:

$$v(p) = (T, I, F) \tag{1}$$

In order to facilitate practical application to decision-making and engineering problems, a proposal was made for single-value neutrosophic sets [7] (SVNS), which allow the use of linguistic variables [8], thus increasing interpretability in recommendation models and the use of indetermination.

Let X be a universe of discourse. An S VNS A on X is an object of form.

$$A = \{(x, u_A(x), r_A(x), v_A(x)): x \in X\}d \tag{2}$$

Where:

$$u_A(x): X \rightarrow [0,1], r_A(x): X \rightarrow [0,1] \text{ y } v_A(x): X \rightarrow [0,1], \text{ con } 0 \leq u_A(x)+r_A(x)+v_A(x) \leq 3 \text{ for all } x \in X.$$

The interval  $(x)$ ,  $r(x)$  and  $v_A(x)$  represents the membership to true, indeterminate and false of x in A, respectively. An SVN number, to measure whether irregularities in the international legal sphere relating to human rights affect migrant workers in Ecuador, in this study is expressed as  $A = (a, b, c)$ , where  $a, b, c \in [0.1]$ , and  $+ b + c + \leq 3$ . The obtained SVN numbers are useful for recommendation systems.

In order to analyze the results, a scoring function is established. An adapted scoring function [9] is used to sort the alternatives:

$$s(V) = T - F - I \tag{3}$$

If the evaluation corresponds to indetermination (not defined) (I), a de-neutrosification process was developed as proposed by Salmerona and Smarandache [10]. In this case,  $I \in [-1,1]$ . Finally, we worked with the average of the extreme values  $I \in [0.1]$  to obtain a single value.

$$\lambda([b_1, b_2]) = (b_1, b_2)/2 \tag{4}$$

This proposal fills a gap in the literature of Iadov's techniques, extending it to deal with indeterminacy and the importance of the user due to experience or any other reason [6].

Based on the above, the individual satisfaction scale shown in table 2 was used to measure the individual satisfaction of each respondent.

Expression	SVN Number	Score
Clear Satisfaction	(1, 0, 0)	1
More satisfied than dissatisfied	(1, 0.25, 0.25)	0.5
Not defined	I	0
More dissatisfied than satisfied	(0.25, 0.25, 1)	-0.5
Clear dissatisfaction	(0,0,1)	-1
Contradictory	(1,0,1)	0

**Table 2.** Individual satisfaction scale. Source: [4].

### 3 Results

In the light of the regulations that have been analyzed in this study, it is pertinent to refer now to another reality and that is decent work. As we know, those who are in an irregular situation are those who are attracting our attention as a matter of priority at the moment, and it is important to analyze whether decent employment can be obtained given the circumstances as they are, both normatively and factually.

There are four parameters necessary to consider that a job is developed under the concept of "decent": "the respect and promotion of fundamental rights at work, collective rights, social protection and social dialogue" as it refers, to which is added that the indicator of decent work is undoubtedly compliance with the principle of equality and non-discrimination at work. It is analyzed that the notion of decent work itself involves several issues that need attention at this point in the research. As has been shown, this issue relates to other established rights, such as the right to dignity.

In relation to this right it is pointed out that with respect to this concept of social dignity it is based on the conception of collective solidarity "by virtue of which it is understood that every human being is framed in a society whose members are united by relations of mutual dependence and responsibilities" [10, 11]. added to this it is possible to say that this type of rights must respond to the needs and interests of all social groups and in addition to pay special attention to the most vulnerable. Thus, the ILO's purpose is not only to create a job but also to guarantee the quality of that job.

At the same time "decent work also means sufficient work (...) everyone should have access to opportunities to acquire income" [12] so in the normative field the notion of this type of principles should be focused on the coexistence of all the conditions that "guarantee the effective compliance with labour standards" [12]. The reality of migrant workers in an irregular situation is observed. On the other hand, it is emphasized that the notions of decent work in the field of migration are aimed at the fact that this is a principle whose attainment is difficult to achieve in the social legal landscape that characterizes migrant workers and migrant women in particular.

The result of applying the IADOV technique to the criteria used in the survey to measure whether irregularities in international human rights law affect migrant workers in Ecuador is shown in table 3.

Expression	Total	%
Clear Satisfaction	15	68.18
More satisfied than dissatisfied	7	30.4
Not defined	0	0
More dissatisfied than satisfied	0	0
Clear dissatisfaction	0	0
Contradictory	0	0

**Table 3:** Results of the application of the IADOV technique to measure whether irregularities in the international legal sphere relating to human rights affect migrant workers in Ecuador. Source: Prepared by the authors

The score is calculated and Iadov's calculation is determined, for our case study a value was assigned in the vector of equal weights  $w_1 = w_2 = \dots = w_i = 0.0456$ . The final result of the method is ISG =0.841, showing that there is an effect on the human rights of migrant workers in Ecuador.

### Conclusion

The normative contemplation of fundamental rights asserts that the only way to achieve equality among all migrant workers remains to open the way for unrestricted migration, an issue that allows decent work for migrant workers in an irregular situation and which could be addressed in the next proposed Global Compact on Migration, as we have seen by the ILO.

The process of measuring irregularities in the international legal sphere of migrant workers in Ecuador, carried out using Iadov neutrosophic technique, quantitatively expressed a high index of affectation in terms of the human rights of migrant workers in that country.

## References

- [1] Rojas, M.A.S., *INCIDENCIA DE LAS NORMAS INTERNACIONALES PARA LA PROTECCIÓN DE LOS TRABAJADORES MIGRANTES IRREGULARES EN COLOMBIA*. Novum Jus: Revista Especializada en Sociología Jurídica y Política, 2017. **10**(2): p. 89-101.
- [2] Gzesh, S., *Una redefinición de la migración forzosa con base en los derechos humanos*. Migración y desarrollo, 2008(10): p. 97-126.
- [3] Rodríguez, H.O., *Derechos Humanos y Migraciones. Un nuevo lente para un viejo fenómeno*. Anuario de Derechos Humanos, 2007(3).
- [4] Segura, C.M.L., C.V.V. Vargas, and N.B. Hernández, *POBREZA, MEDIO AMBIENTE Y PROACTIVIDAD DEL DERECHO*. Open Journal Systems en Revista: REVISTA DE ENTRENAMIENTO, 2018. **3**(2): p. 83-92.
- [5] Chaumette, P., *El Convenio sobre el trabajo marítimo, cuarto pilar del Derecho internacional marítimo*. Revista del Ministerio de Trabajo e Inmigración, 2009. **82**: p. 65-76.
- [6] Hernández, N.B., et al., *Validation of the pedagogical strategy for the formation of the competence entrepreneurship in high education through the use of neutrosophic logic and Iadov technique*. Neutrosophic Sets & Systems, 2018. **23**.
- [7] Nguyen, T., *Vietnam's National Foreign Language 2020 Project after 9 years: A Difficult Stage*. International Economic, 2017.
- [8] Pérez-Teruel, K. and M. Leyva-Vázquez, *Neutrosophic logic for mental model elicitation and analysis*. Neutrosophic Sets and Systems, 2012: p. 30.
- [9] Vázquez, M.L. and F. Smarandache, *Neutrosophia: Nuevos avances en el tratamiento de la incertidumbre*. 2018, Pons Publishing House.
- [10] Zadeh, L.A., *Fuzzy logic, neural networks, and soft computing*, in *Fuzzy Sets, Fuzzy Logic, And Fuzzy Systems: Selected Papers by Lotfi A Zadeh*. 1996, World Scientific. p. 775-782.
- [11] Ricardo, J.E., et al., *Reflexiones acerca de la pertinencia e impacto de la educación superior en Ecuador desde su perspectiva actual*. Open Journal Systems en Revista: REVISTA DE ENTRENAMIENTO, 2018. **3**(3): p. 81-92.
- [12] nandez, N.B. and J.E. Ricardo, *Gestión Empresarial y Posmodernidad*. 2018: Infinite Study.

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