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# Bayesian Analysis: Use of South American Government Strategies in Correlation to Technological Solutions -IA

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**Abstract**

Currently there are great advances regarding "LegalTech" but there is a need to generate strategies by governments in artificial intelligence (AI) solutions in legal services, where the purpose of this study was to know the state scenarios in the political-technological environment, where the governments of Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador and Peru have a national strategy for the adoption of AI solutions. A quantitative research for legal research or empirical approach was conducted. A Bayesian test of association was performed using JASP Version 0.16.3 statistical software. The results show that from the state scenarios in the political-technological environment of the governments with significant values of the correlation of (P2-P5) for Argentina has a median Log (OR=1.268), a (BF0+=1.533) and a (BF+0=0.652) with a credibility interval (CI) of (95%) with values between [.054, 4.638]; Bolivia has a median Log (OR=1.277), a (BF0+=1.522) and a (BF+0=0.657) with a credible interval (CI) of (95%) with values between [.055, 4.669]; Brazil has a Log median (OR=1.259), a (BF0+=1.514) and a (BF+0=0.661) with a credible interval (CI) of (95%) with values between [.054, 4.602]; Chile has a Log median (OR=1.257), a (BF0+=1.505) and a (BF+0=0.664) with a credible interval (CI) of (95%) with values between [0.054, 4.595]; Colombia has a Log median (OR=1.280), a (BF0+=1.489) and a (BF+0=0.672) with a credible interval (CI) of (95%) with values between [0.055, 4.661]; Ecuador has a Log median (OR=2.020), a (BF0+=0.747) and a (BF+0=1.338) with a credible interval (CI) of (95%) with values between [0.106, 6.004]; Peru has a Log median (OR=2.046), a (BF0+=0.756) and a (BF+0=1.324) with a credible interval (CI) of (95%) with values between [0.107, 6.104]; It is concluded that the Bayesian probability of the governments of Argentina, Bolivia, Brazil, Chile, and Colombia having a national strategy for the adoption of AI solutions are (1.533), (1.522), (1.514), (1.505), (1.489), (1.338), and (1.338) times more probable than the positive correlation when there are technological solutions that provide support to judicial procedures based on artificial intelligence. In the countries of Ecuador and Peru the probability of a national strategy for the adoption of AI solutions which are (1.338), (1.324) times more likely, i.e. against a positive correlation that there are technological solutions that provide support to judicial procedures based on artificial intelligence.

***Key words:*** *Bayes analysis, government strategies, technological solutions (IA).*

**Introduction**

In recent years, the governments of South America have been facing great challenges in their quest to modernize their processes and public services. The services offered to citizens through new technologies imply organizational changes within public administrations, but also changes in the relationship between the government and other sectors (Ruvalcaba-Gomez & Cifuentes-Faura, 2023). Currently, the market offers dozens of legaltech tools and services that are based on artificial intelligence, mainly natural language processing tools based on machine learning (Soukupová, 2021). In addition to the above, the rapid advancement of artificial intelligence has boosted legal technologies (LegalTech), generating significant changes in the scope of the legal market (Pasvenskiene & Astromskis, 2020). The incorporation of advanced technologies, such as artificial intelligence (AI), has provided tools to address these challenges. AI applications are being designed to fill gaps in areas with cumbersome processes, such as records or repetitive lawsuits (Veronese & Lemos, 2021). Legaltech has strengthened terms that are beginning to be used as techniques, some of them are: Artificial Intelligence, Machine Learning or Natural Language Processing Systems (Salmerón-Manzano, 2021). Similarly, news is given regarding the development of AI by Batista (2019) in judicial decisions is established in the Prometea project year 2017 in Argentina implement the first predictive artificial intelligence system under a voice assistant facilitating a legal opinion in an integral way. However, according to the Corporation for Excellence in Justice 2020, it is exemplified that, in Colombia, no less than five years ago, it was established that 2,278,530 processes were effectively entered, an active inventory of 1,830,958 processes and an effective outflow of 1,854,505 processes.

The above indicates that the number of proceedings before the judges, plus those that enter daily in the offices, increase exponentially compared to those that leave the jurisdiction, to infer the authors, causing congestion in the judicial system and therefore causing judicial delay. According to Dobratinich (2022). Turning to "Artificial Intelligence and Justice: Applicability of technology in judicial decisions in Argentina", looking at the epistemological basis and perspectives, in the legal field it focuses on a duo of approaches, a) theoretical proposals that link and problematize, that is, the fusion between the judicial decision and the applicability of artificial intelligence and b) the analysis of the mode, criteria and cognitive variables in influencing the daily practice in the framework of the decision and interpretation in the head of the magistrates. To conclude, in the proposal, that the combination between the judicial task performed by the judges in the respective decisions and the IA is outstanding for the practical theoretical impulse in the various areas of law. Approach that leads to the compendium to access and develop AI, computer sciences and technologies in general. Thus, in Argentina and the countries under study, the positive and negative effects caused by AI in the decision making that occupies the magistrates in the plural and diverse stages that the exercise of the profession demands in procedural matters. Beyond the possibilities that an increasingly near future holds, it is important to take a look at the space that artificial intelligence has been gaining in law (Cárdenas Krenz, 2021). In addition, to erect solid theoretical tools, which provide an opening not only in Argentina but also in other countries in the study to establish a renewed and visible dialogue between the legal and technology. For Dobratinich (2022) out of what has been said as indicated, he states:

“Varied will be the literature, tentative and recent applications of AI in judicial decision-making processes. The ambivalent positions on the use and interference of AI in the field of judicial processes will be replicated in all the links between law and technology”.

In Argentina, LegalTech is embraced by several law firms and startups seeking to automate processes and case management. While Brazil aims to improve access to justice by modernizing the legal system, Chile focuses on improving productivity with a view to case management by automating processes.

Bolivia today is also immersed in LegalTech which is identified with legal informatics, dealing with legal advice, brand management, online dispute resolution, legal research in a line of artificial intelligence associated with legal risk management, litigation among other spaces that allows the LegalTech framework. Therefore, in Bolivia as in much of the world, the concept and application of LegalTech makes legal professionals a necessity, therefore, the country in question in its judicial system requires a great update in the field. Therefore, it is predicted, the lawyer must possess digital citizenship, electronic signature as part of a computer system to interact in the judicial

administration at the time. Accordingly, the LegalTech ecosystem in Bolivia has been reported in the public and private sectors. This is to say, the beginnings in the public order in 1995 and 1997 show the exercises that took place in the judicial sector with the aim of systematizing certain activities of its management processes, specifying, the IANUS computer system, typified as a computer support service to the judicial activity that includes managing the distribution, assignment and supervision of the cases. The country has laws associated with software development in the public and private sector, such as Supreme Decree No. 24582 of April 25, 1997, which regulates the Regulation of Software, as well as Law No. 164 of August 8, 2011, General Law of Telecommunications, Information and Communication Technologies, which includes the use of free software and electronic contracts. Now the Supreme Decree No. 2514 issued on September 9, 2015, allows the creation of the Agency of Electronic Government and Information and Communication Technologies - AGETIC, a public institution that seeks the implementation of policies, plans and strategies of Electronic Government and Information and Communication Technologies, directed to State entities. This facilitated various projects and policies from the perspective of modernizing and transforming public management, helping to minimize bureaucracy. In 2017, the Integrated Judicial Registry System (SIREJ), a computer program that facilitates the registration of files, administration and follow-up of judicial matters via web and mobile application, was implemented. In the same year, on July 12, Supreme Decree No. 3251 was issued, approving the Plan for the Implementation of Electronic Government as well as the Free Software and Open Standards Plan, which aims to simplify procedures and access to public services with efficiency, quality and transparency, emphasizing technology in the Plurinational State of Bolivia. In 2020, in the Bolivian LegalTech field, the provision of Public Services stands out, with guidelines such as: To have the judicial system of virtual hearings using the Blackboard platform, the Public Prosecutor's Office makes use of the electronic notebook of investigations of the Public Prosecutor's Office known as the Free Justice Computer System. To close, Bolivia's LegalTech space is moving forward, however, more than one project is based on knowledge management, contract compilation or the early version of legal directories.

According to Santos (2022) indicates that EBIA is a mechanism capable of inserting Brazil in the AI regulatory race, but it needs strong and effective public policies aimed at its implementation, However, it works with nine thematic axes, with three cross-cutting axes: Legislation, regulation and ethical use. In this thematic area, the visible concerns of the EBIA according to Santos (2022) are identified with: "1) the protection of personal data; 2) prevention of discrimination and algorithmic bias; 3) balance aimed at preserving adequate incentive structures for the development of AI; 4) creation of legal parameters aimed at legal certainty and the responsibility of the different actors involved in its production chain". Where it is stated that the State is responsible for establishing technical standards and requirements that are compatible with the sponsorship of responsible AI, but at the same time practice with the forms of accountability previously typical in legal standards. In that order, if prioritized, the mapping of legal and regulatory barriers is paramount for the identification aimed at promoting legal certainty. Artificial intelligence (AI) has had a significant impact in a globalized world, where connectivity and interdependence between countries and cultures are increasingly evident (Guerrero-Quiñonez et al., 2023). Finally, the main contributions of the aforementioned work lie in the finding that the civil taxation of unlawful acts practiced by IA or during the course of its performance, execution and implementation must be the subjective modality.

In this way, it facilitates the mitigation of damages according to the precautionary costs actually allocated for the configuration of an ethical, solid and robust AI. World Bank reports present only a tabular analysis of e-government in Argentina, Brazil, Mexico and no summary of the findings, with only a brief statement of e-government progress in terms of government policies and committees (Lau et al., 2008). Although South American governments have been improving public services in recent years with the use of technological tools. Technology is a tool, and artificial intelligence (AI) enables a variety of new applications, which can effectively break with traditional ways of providing services, provide novel ones or update existing ones (Jimenez-Gomez et al., 2020). But from another perspective there is Chile, where researchers from the Universidad Autónoma de Chile, such as Contreras (2021) investigate the inclusion of new technologies in the Chilean legal profession to explain the curricular innovation of the minor in Artificial Intelligence and Law (AI+D) following the learning outcomes. In such an order, it is pertinent to leave the terminations that are reached after a theoretical journey, as

AI is a generator of monumental impacts on society both in Chile and in other world instances, leading to rethink one or another institution that supports the Chilean legal system, according to Contreras (2021) for which questions of the following order are left:

“"Who is responsible when, or as a consequence of the use of these technologies and devices, damage is caused? Should the professionals who control and supervise the robot, the manufacturer, the programmers or the owner company be sued?”

Faced with the social problems that arise in the legal academy in Chile, it is suggested that law schools weigh the situation, measure the impact today and tomorrow, and thus achieve a diagnosis that facilitates the identification of the weaknesses of the curricula in Chile and adjust them to the mission and vision of training professionals with skills to use new technologies, and, in addition, to work on the development of solutions that manage them. This issue, it can be seen, is not only supplied with curricular contents that update future lawyers in association with the irruption of AI, but it is essential to provide tools that facilitate the future lawyer, not only to know but to use the new technologies, transforming him simultaneously, in user and developer, therefore, for Contreras (2021).

“ authors understand that it is essential to understand its language, cyber risks, the value of personal data and ethics in its implementation, but, above all, to generate curricular spaces that allow students to think about how to solve legal problems using algorithms.”.

It is recurrent today to observe government strategies for the adoption of AI solutions in legal services, it is found in Colombia according to articles associated with the transition of electronic government under the label of digital government denoting legal background and programs as perceived according to Ospina (2023) in the "Digital government and artificial intelligence, a look at the Colombian case", under CONPES 3072year 2000, 3650year 2010, CONPES 3701year 2011, CONPES 3854year 2016, CONPES 3920year 2018, CONPES3975year 2019, CONPES3995year 2020, Decrees 767 of 2002, Decree 115 1 of 2008, Decree 2693 of 2012, Decree 1510 of 2013, Decree 1008 of 2018, Decree 620 of 2020, Law 1341 of 2009, Law 1581 of 2012, Law 1978 of 2019, Law 2069 of 2020, Law 2108 of 2021. It is noteworthy that following the above and the source, in Colombia stands out the implementation works in the legal framework detected in the Pretoria platform of the Constitutional Court, which consists of an information system that, according to the Constitutional Court (2020), amplifies the capabilities for the knowledge of the cases in the head of the judges, allowing the justice administrators to analyze and structure the sentences associated with tutelas that are framed in review of the Constitutional Court, under the use of AI algorithms. It is stated, therefore: the tool is highlighted in the production of timelines, statistics and graphs, allowing a holistic and comprehensive approach to guardianship according to Ospina (2023). It is well concluded, by Ospina Diaz and Zambrano Ospina, that the Colombian State has evolved in the models of public management following trends, social needs and political will of the rulers, in which there is a shift from an e-government perspective to a digital government policy, in which asymmetries are observed in the digital transformation between the various entities not only national and territorial, government strategies for the adoption of AI solutions are strengthened daily and more in the legal framework in the service of the administration of justice in the high courts. In Colombia, LegalTech optimizes efficiency and productivity and provides access to justice using online platforms such as mobile applications. According to Páez et al. (2021), "LegalTech" is observed as a business model in the Colombian legal field.

It is highlighted that LegalTech in Ecuador is currently hosted by law firms to offer a high coverage of technological solutions impacting the practice of law, challenges, opportunities demanded by the country in the use of legal technologies under the following structure: Process automation, case management, online platforms, artificial intelligence AI, improved access to justice, improved quality of information. Now, however, the benefits of LegalTech. In the South American region, Argentina, Colombia and Uruguay are among the countries recognized by the OECD as active in the field of artificial intelligence (Urbanovics, 2023). Ecuador is facing specific challenges in the adoption of legal technologies. For example, the lack of regulation and standards in the use of LegalTech, causing uncertainty in users and lawyers, which added to the precariousness of resources and

training, hinders the adoption of legal technologies in Ecuadorian territory. The vision of what is happening in the countries mentioned leads to finalize, according to Romo (2022):

"The LegalTech business offers tremendous opportunities to improve the legal sector, but it also presents challenges and concerns that need to be addressed. By collaborating and working together, legal professionals and technology companies can take full advantage of LegalTech opportunities and create innovative and effective solutions that improve efficiency and accessibility in the legal system for the benefit of societies".

LegalTech is adjusted in Peru as another case in the automation of processes and case management with the vision of efficiency and cost reduction accompanied by improved access to justice, Uruguay likewise and finally Venezuela employs LegalTech in search of efficiency, productivity, achieving better access to justice with online platforms and mobile applications. Finally, Legaltech is a term that contains a wide range of technological aspects that will allow legal services to become very effective, generating many benefits among them saving a lot of time. Legaltech is not just an abstract concept, but involves many technological and developmental aspects for the adequate provision of legal services through the implementation of technology (Cárdenas & Molano, 2022). The relationship between law and artificial intelligence requires adaptation to scientific and social changes without losing principles and guarantees (Luna et al, 2022).

**Methodology**

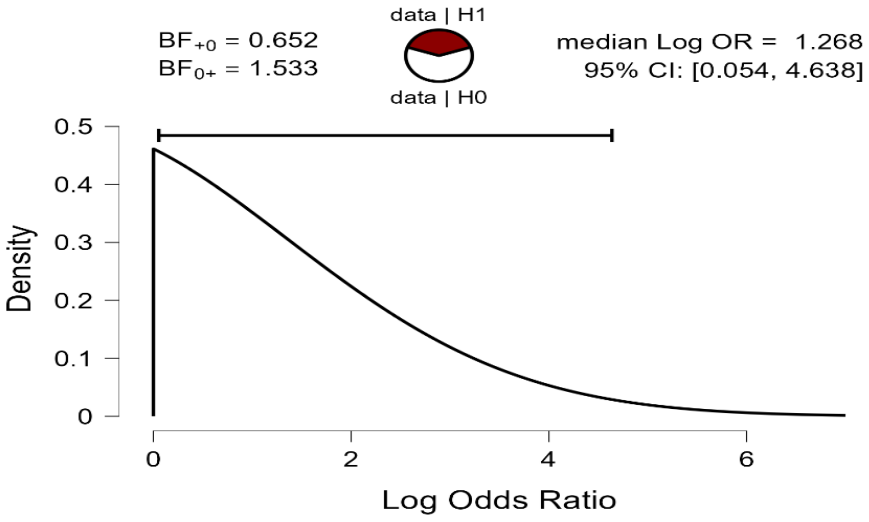
Bayesian inference in empirical legal research offers practices for applying Bayesian procedures and interpreting the results divided into four stages: 1) Analysis planning stage. 2) Executing the analysis stage. 3) Interpretation of the results stage. 4) Report of the results stage. Where P2: The government has a national strategy for the adoption of AI solutions. And P5: There are technological solutions (products/services) that provide support to judicial procedures based on artificial intelligence As a ratio between the number of occurrences and the number of non-occurrences. Where a probability is converted to odds by applying the equation (probability/(1-probability)), and an odds is converted to probability by applying the equation (odds/(odds+1)).

**Results**

Following is the value of the Bayesian contingency tests according to the countries: Argentina with a Log ( $BF_{+0}$ ) Independent multinomial of (-0.427); Bolivia with a Log ( $BF_{+0}$ ) Independent multinomial of (-0.420); Brazil with a Log ( $BF_{+0}$ ) Independent multinomial of ( -0. 415); Chile with a Log ( $BF_{+0}$ ) Independent multinomial of (-0.409); Colombia with a Log ( $BF_{+0}$ ) Independent multinomial of (-0.398); Ecuador with a Log ( $BF_{+0}$ ) Independent multinomial of (0.291); Peru with a Log ( $BF_{+0}$ ) Independent multinomial of (0.280);

**Figure 1**

Analysis of the Bayesian probability of the Country Argentina (P2 - P5)

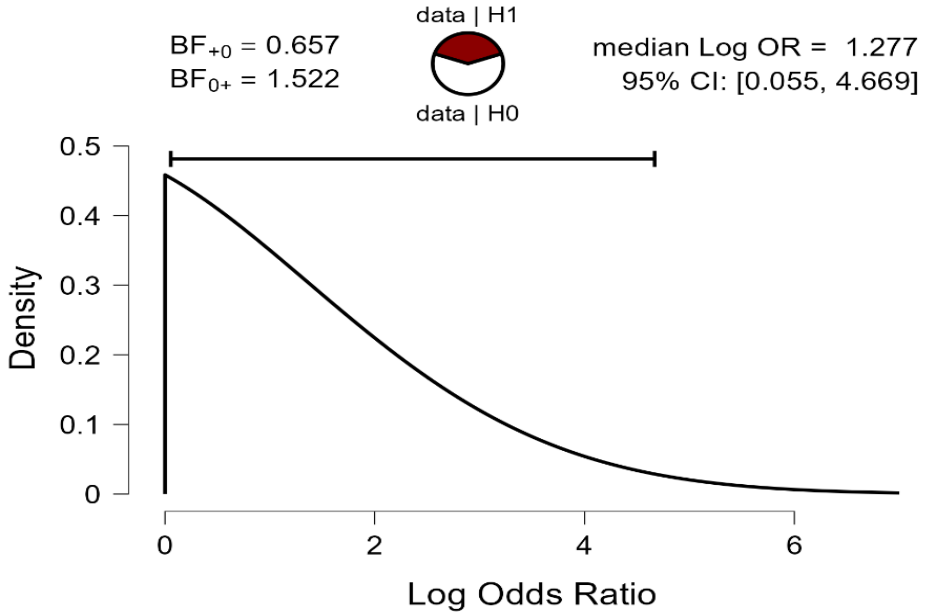


*Note*. The graph represents the analysis of the Bayesian probability of Argentina between (P2-P5) with its Log median OR, BF0+ and BF+0 with the JASP statistical software (Version 0.16.3) [Computer software].

Below is the description for the country of Argentina, where odds ratio (OR) expresses the possibility of occurrence of an event of interest using probabilities (P2–P5). As a quotient between the number of events and the number of non-events. Where P2: The government has a national strategy for the adoption of AI solutions. And Q5: There are technological solutions (products/services) that provide support for judicial procedures based on artificial intelligence. Since there are no limits to its interpretation, the information is descriptive; therefore, when the confidence interval (CI) does not include 1, it is statistically significant given its association. The results obtained using the JASP computational statistical program of the Bayesian evaluation of significant correlation values of the correlation of (P2-P5) show a Log median (OR=1.268), a (BF0+=1.533) in favor of the positive correlation and a (BF+0=0.652) against the positive correlation with a credibility interval (CI) which is at (95%) where it yields values between [.054, 4.638].

**Figure 2**

Analysis of the Bayesian probability of the Country Bolivia (P2 - P5)

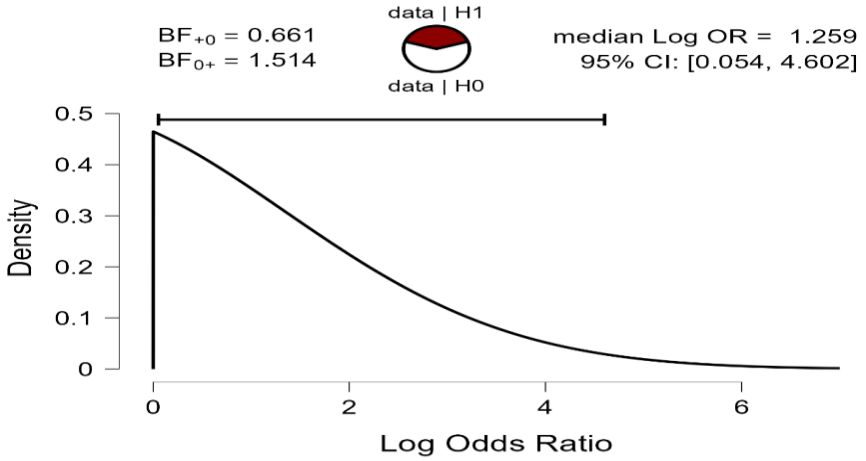



*Note*. The graph represents the Bayesian probability analysis of Bolivia between (P2-P5) with its Log median OR, BF0+ and BF+0 with the JASP statistical software (Version 0.16.3) [Computer software].

Below is the description for the country of Bolivia, where odds ratio (OR) expresses the possibility of occurrence of an event of interest using probabilities (P2–P5). As a quotient between the number of events and the number of non-events. Where P2: The government has a national strategy for the adoption of AI solutions. And Q5: There are technological solutions (products/services) that provide support for judicial procedures based on artificial intelligence. Since there are no limits to its interpretation, the information is descriptive; therefore, when the confidence interval (CI) does not include 1, it is statistically significant given its association. The results obtained using the JASP computational statistical program of the Bayesian evaluation of significant correlation values of the correlation of (P2-P5) show a Log median (OR=1.277), a (BF0+=1.522) in favor of the positive correlation and a (BF+0=0.657) against the positive correlation with a credibility interval (CI) which is at (95%) where it yields values between [.055, 4.669].

Figure 3

Analysis of the Bayesian probability of the Country Brazil (P2 - P5)

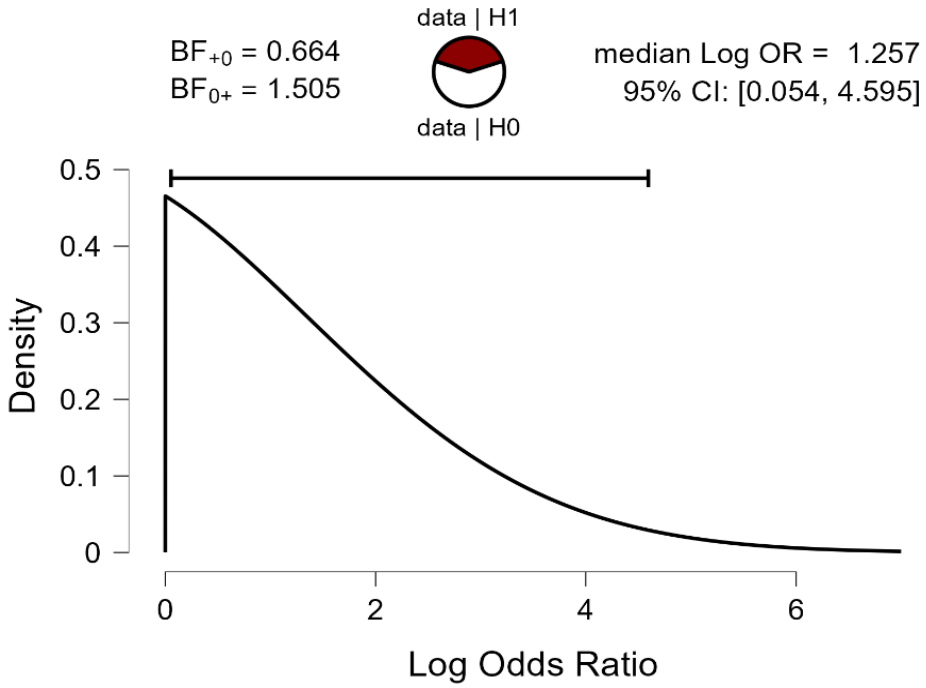



*Note*. The graph represents the Bayesian probability analysis of Brazil between (P2-P5) with its Log median OR, BF0+ and BF+0 with JASP statistical software (Version 0.16.3) [Computer software].

Below is the description for the country of Brazil, where Log odds ratio (OR) expresses the possibility of occurrence of an event of interest using probabilities (P2–P5). As a quotient between the number of events and the number of non-events. Where P2: The government has a national strategy for the adoption of AI solutions. And Q5: There are technological solutions (products/services) that provide support for judicial procedures based on artificial intelligence. Since there are no limits to its interpretation, the information is descriptive; therefore, when the confidence interval (CI) does not include 1, it is statistically significant given its association. The results obtained using the JASP computational statistical program of the Bayesian evaluation of significant correlation values of the correlation of (P2-P5) show a Log median (OR=1.259), a (BF0+=1.514) in favor of the positive correlation and a (BF+0=0.661) against the positive correlation with a credibility interval (CI) which is at (95%) where it yields values between [.054, 4.602].

Figure 4

Analysis of the Bayesian probability of the Country Chile (P2 - P5)

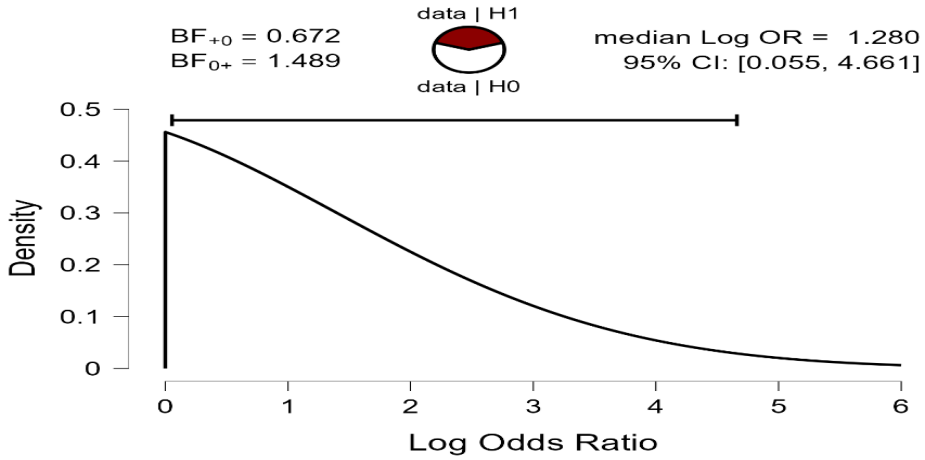


*Note*. The graph represents the Bayesian probability analysis of Chile between (P2-P5) with its Log median OR, BF0+ and BF+0 with the JASP statistical software (Version 0.16.3) [Computer software].

Below is the description for the country of Chile, where Log odds ratio (OR) expresses the possibility of occurrence of an event of interest using probabilities (P2–P5). As a quotient between the number of events and the number of non-events. Where P2: The government has a national strategy for the adoption of AI solutions. And Q5: There are technological solutions (products/services) that provide support for judicial procedures based on artificial intelligence. Since there are no limits to its interpretation, the information is descriptive; therefore, when the confidence interval (CI) does not include 1, it is statistically significant given its association. The results obtained using the JASP computational statistical program of the Bayesian evaluation of significant correlation values of the correlation of (P2-P5) show a Log median (OR=1.257), a (BF0+=1.505) in favor of the positive correlation and a (BF+0=0.664) against the positive correlation with a credibility interval (CI) which is at (95%) where it yields values between [0.054, 4.595].

**Figure 5**

Analysis of the Bayesian probability of the Country Colombia (P2 - P5)




*Note*. The graph represents the analysis of the Bayesian probability of Colombia between (P2-P5) with its Log median OR, BF0+ and BF+0 with the JASP statistical software (Version 0.16.3) [Computer software].

Below is the description for the country of Colombia, where Log odds ratio (OR) expresses the possibility of occurrence of an event of interest using probabilities (P2–P5). As a quotient between the number of events and the number of non-events. Where P2: The government has a national strategy for the adoption of AI solutions. And P5: There are technological solutions (products/services) that provide support for judicial procedures based on artificial intelligence. Since there are no limits to its interpretation, the information is descriptive; therefore, when the confidence interval (CI) does not include 1, it is statistically significant given its association. The results obtained using the JASP computational statistical program of the Bayesian evaluation of significant correlation values of the correlation of (P2-P5) show a Log median (OR=1.280), a (BF0+=1.489) in favor of the positive correlation and a (BF+0=0.672) against the positive correlation with a credibility interval (CI) which is at (95%) where it yields values between [0.055, 4.661].

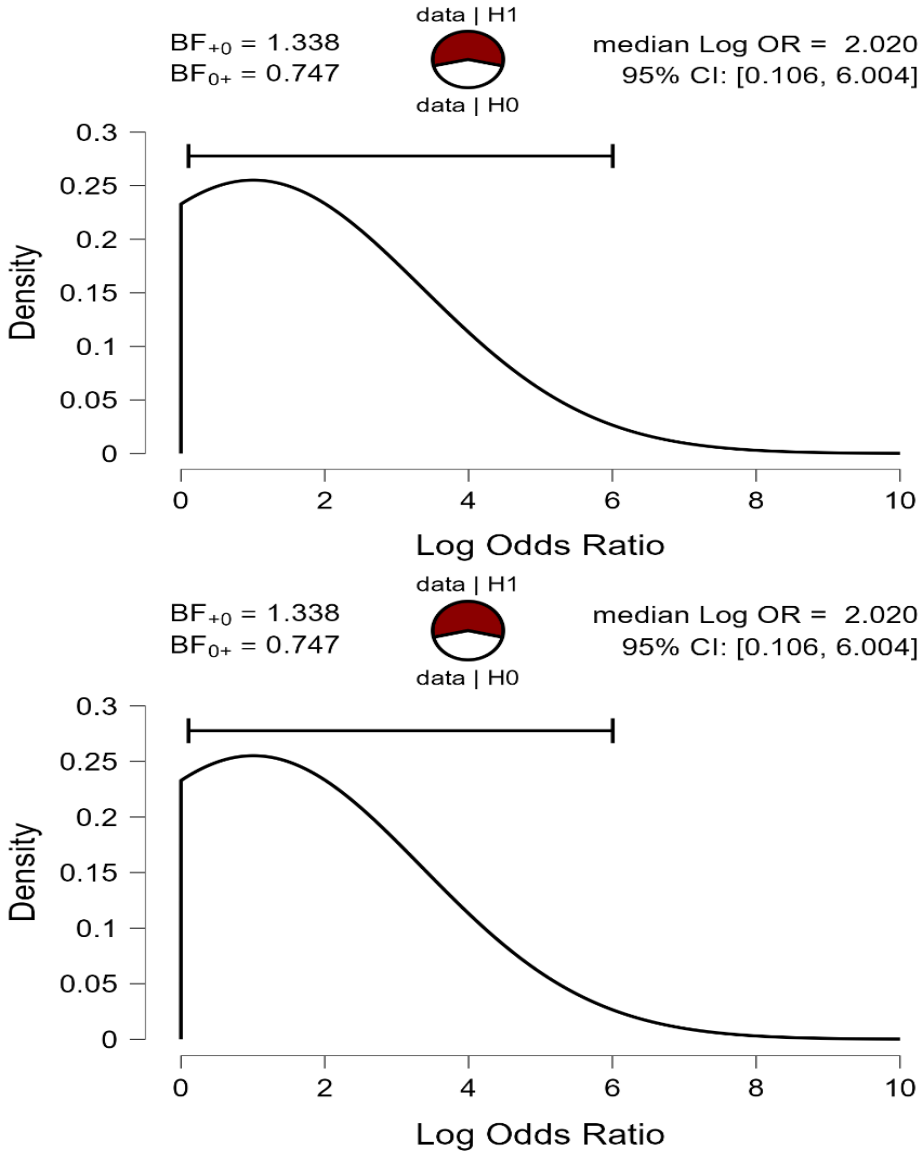



**Figure 6**

Analysis of the Bayesian probability of the Country Ecuador (P2 - P5)

*Note.* The graph represents the Bayesian probability analysis of Ecuador between (P2-P5) with its Log median OR, BF0+ and BF+0 with the JASP statistical software (Version 0.16.3) [Computer software].

Below is the description for the country of Ecuador, where Log odds ratio (OR) expresses the possibility of occurrence of an event of interest using probabilities (P2–P5). As a quotient between the number of events and the number of non-events. Where P2: The government has a national strategy for the adoption of AI solutions. And P5: There are technological solutions (products/services) that provide support for judicial procedures based on artificial intelligence. Since there are no limits to its interpretation, the information is descriptive; therefore, when the confidence interval (CI) does not include 1, it is statistically significant given its association. The results obtained using the JASP computational statistical program of the Bayesian evaluation of significant correlation values of the correlation (P2-P5) show a Log median (OR=2.020), a (BF0+=0.747) in favor of the positive correlation and a (BF+0=1.338) against the positive correlation with a credibility interval (CI) which is at (95%) where it yields values between [0.106, 6.004].

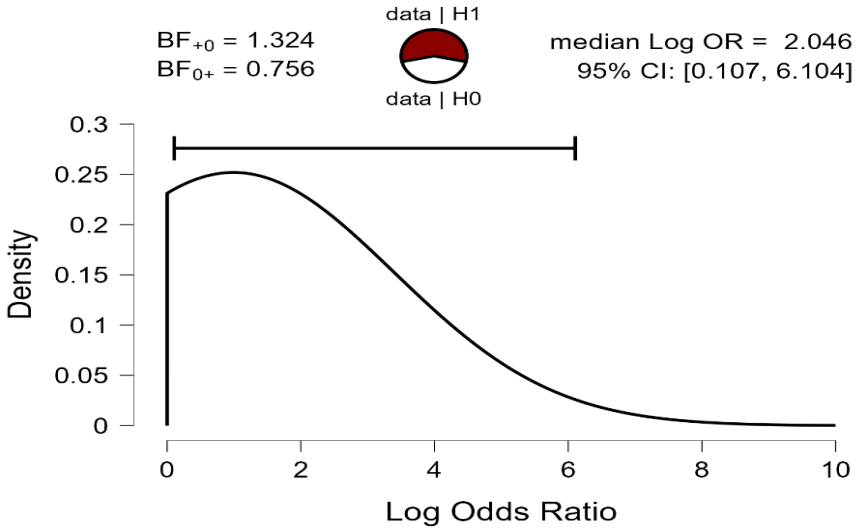



**Figure 7**

**Analysis of the Bayesian probability of the Country Peru (P2 - P5)**

*Note.* The graph represents the analysis of the Bayesian probability of Peru between (P2-P5) with its Log median OR, BF0+ and BF+0 with the JASP statistical software (Version 0.16.3) [Computer software].

Below is the description for the country of Peru, where Log odds ratio (OR) expresses the possibility of occurrence of an event of interest using probabilities (P2–P5). As a quotient between the number of events and the number of non-events. Where P2: The government has a national strategy for the adoption of AI solutions. And P5: There are technological solutions (products/services) that provide support for judicial procedures based on artificial intelligence. Since there are no limits to its interpretation, the information is descriptive; therefore, when the confidence interval (CI) does not include 1, it is statistically significant given its association. The results obtained using the JASP computational statistical program of the Bayesian evaluation of significant correlation values of the correlation of (P2-P5) show a Log median (OR=2.046), a (BF0+=0.756) in favor of the positive correlation and a (BF+0=1.324) against the positive correlation with a credibility interval (CI) which is at (95%) where it yields values between [0.107, 6.104].

**Conclusions**

According to Martínez (2012). "Artificial intelligence and its application to the field of Law", Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador and Peru who make use of technology in the use of law, outside of limiting themselves to documentary legal computing, in addition, to Legal management informatics, the option of giving course to meta-documentary informatics, is feasible, helping judges to structure the reasoning to resolve. For Rincón (2021) "Legal knowledge engineers can be modeled to create computer programs that can simulate cognitive processes.". For Rincón (2021). "A study on the possibility of applying artificial intelligence in judicial decisions", in a reference for Brazil, without being strange Argentina, Chile, Ecuador, Peru Bolivia, is appreciated in the globality of the artificial intelligence associated with Law is not isolated to develop logical, orderly and analytical structures, according to Batista (2019), the same as the interpretation of legal dogmatics mediating Information and Communications Technologies (ICT), according to Nava (2019) without leaving aside the words of doctrinaires among them where artificial intelligence in law is reflected in models for argumentation and decision making, classification and extraction of legal texts, extraction of information from legal texts, also in the creation and planning of a legislative system.

It is concluded that the Bayesian probability of the governments of Argentina, Bolivia, Brazil, Chile, and Colombia, have a national strategy for the adoption of AI solutions which are (1.533), (1.522), (1.514), (1.505) , (1.489), (1.338), and (1.338) times more likely to have a positive correlation when there are technological

solutions that provide support to judicial procedures based on artificial intelligence. On the other hand, in the countries of Ecuador and Peru the probability of a national strategy for the adoption of AI solutions is (1,338), (1,324) times against a positive correlation that there are technological solutions that provide support to the procedures judicial proceedings based on artificial intelligence.

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