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Algorithmic Regulation, Justice, and Labor Competitiveness: The Impact of the Artificial Intelligence Regulation in Latin America

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Abstract

The purpose of this article was to analyze the incidence of the Artificial Intelligence Regulation on the Labor Competitiveness of companies in the Latin American context, due to the emerging regulation that AI merits on data protection, privacy and public use in a convergent way, gathering information from the literature, so the study method was narrative with support in systematic reviews of information sources, from a qualitative approach documentary type of bibliographic design, using the technique of content analysis to compare findings between authors. As a result, it was evidenced the wide margin of intervention that is required with RIA to verify the validity of legal implementation of its usability in replacement of the worker's adaptability to its labor use, which would contribute to evaluate the scenarios where the processes of labor training in AI are audited; thus concluding on the need to have the main functions of scientific, ethical, moral, transparent and transparent criteria and with a record of processed data on the content of information from third parties to companies and institutions where the AI modeled system can be adopted to improve labor competitiveness.

Keywords: *Algorithmic Regulation, Labor Competitiveness, Artificial Intelligence and Labor Law, Distributive Justice, Latin America.*

Introduction

The work environment has become more competitive with Artificial Intelligence (AI), and in turn more risky for the regulatory provision that corresponds to a broad control of the various tools, resources and utilities that companies give to AI, in the hands of their employees or employers in order to improve their productivity with the implementation of the technological systems that AI offers as well as the risks that its obligation of transparency of data submitted by companies, as referred to by the Transparency Council in Chile according to the General Standards Resolution CVE 2537198 of August 12, 2024, which details the guidelines for its use

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together with the absence of its implementation by public and private companies in accordance with the aforementioned Transparency Law, which seeks to declare the way in which AI systems are used in a semi-automated and automated way to improve the work of workers as well as their contribution to their development.

However, this technological transformation is not without ethical and legal challenges, especially in regions with structural inequalities such as Latin America, on this John Rawls' theory becomes of paramount importance, in particular, his principle of difference, which offers a kind of normative framework to evaluate how the inequalities generated by AI can be structured in a way that benefits the less advantaged.

Therefore, the timely declaration of companies on the reason for implementing AI systems to improve their labor competitiveness lies in the need to have transparency of information in the use of private and public data with which it works, according to the challenges and promises represented by the long-term use of AI. since there are scenarios where the provision of AI in work environments violates national and international regulations such as those of the European, North American and Eastern Council due to the legal and social consequences caused to the detriment of workers in the way such systems operate, where the impact on the quality of life of people who acquire products or services by companies as well as the generation of false content that has been disseminated through the informative generation of such content by AI, causes disinformation controversies promoted by companies not regulated by such transparency.

As noted above, Rawls' approach and particularly the principle of difference in the workplace necessarily implies that artificial intelligence systems that influence decisions on employment, promotion or dismissal, must be designed under principles of equity and transparency, this perspective justifies the need for regulatory frameworks that not only manage technological risks, but also but also actively promote social justice, particularly in the Latin American context, where digital and labor divides coexist with institutional weaknesses, the incorporation of distributive justice criteria in algorithmic regulation becomes an ethical and political requirement.

The advent of artificial intelligence in the workplace certainly represents an advance of capital relevance, particularly with regard to the parameters of efficiency and automation, however it also raises issues of high legal complexity, which extend beyond the central elements of transparency and privacy, in this same context the contexts where algorithmic systems assume a role determining in decisions that affect the labor construct of workers, in this sense the existing indeterminacy in the attributions of responsibility in situations in which the decisions are particularly harmful and discriminatory, in this sense the obligation of a regulatory reformulation that establishes precisely the legally attributable responsibility is imposed.

This problem acquires an even more complex dimension in Latin America, where the legal frameworks in force in many cases are not properly adapted to regulate the performance of AI in the workplace, thus raising the question about the legal validity of an employment contract whose critical decisions are delegated to opaque algorithmic systems, lacking clear mechanisms of human supervision, in this context, the principle of transparency must be erected as a guiding axis in the regulation of AI, requiring that workers clearly understand the criteria that guide automated decisions that involve them, as well as guaranteeing them an effective right to challenge in case of arbitrariness or algorithmic bias.

To this end, competitiveness is usually invoked as a justification for automating processes and

outsourcing decisions to artificial intelligence systems, however in the Latin American context there is a predominance of unequal economies and an abundance of informal labor markets, in which this automation can consequently reinforce pre-existing exclusions, as has been evidenced in the European regulatory debates where the need for the Artificial intelligence has control frameworks that integrate not only efficiency, but also principles of equity, impartiality and protection of rights.

This balance between innovation and justice is one of the great challenges of the global south, so the vision put forward by Rawls offers valuable conceptual tools to assess the legitimacy of technological transformations in the workplace, demanding that any inequality derived from a new system is only acceptable if it benefits the least advantaged.

In this way, the process of regulating artificial intelligence in companies aimed at a systematic report of usability, control and transparency of the information handled from the human talent of the organization, to the end public to which its services are directed, requires an approved validation of the margins of incidence that both the expected productivity of the company, as well as in the reliability of information received and perceived by its users; with the reality of the standards of quality and transparency of the information provided, ensuring that no other data security system system has been violated or illicit use of content on the Internet on competitors or customers to improve commercial productivity indexes, forming part of the emergence of national policies – strategies and, in addition, specific regulations on data protection and cybersecurity.

This, in turn, requires inquiring into the dimensions of AI in legal environments, since there are various regulatory modalities that can be assigned to AI models used privately and publicly in entities, institutions, and social groups that require current regulatory blocks to the impact of AI that can legalize its usefulness objectively; simultaneous to the technological and competitive development of State institutions, companies and the society that consumes its content; which requires an auditing, certifiable and transparent orientation of the environments in which it is employed, especially if it is in the labor field where profits are maximized based on the competitiveness it provides by replacing human talent, needing decisions on how to regulate it.

Its due legal regulation, as has been proposed in European institutions, would ensure that AI in companies does not threaten the creative freedom of its collaborators or violate intellectual property rights that are affected by the transformative effect of companies; therefore, fundamental and democratic rights must be enforced, since if this is not done, it could take us back in time to a digital dictatorship imposed by large technology companies, since technological progress that seems desirable, should not imply a democratic involution.

In turn, such regulations consider the damage caused by AI and the right to receive a due demand for its attention as the European Union has proposed as a strategy of blocks based on security legislation, horizontal regulations of AI systems as well as civil liability consistent with the Artificial Intelligence Law of the 2021 Regulation that extend the contractual liability for the acquisition of such systems by groups civil law of public or private order, which for its commercial purposes acquired by virtue of enabling technological and competitive development in a transparent manner, must determine the responsibility of the subjects involved in its use while offering adequate compensation to victims; whose complexity of these systems implies articulating an *ex novo* legislation that allows the development of technology and protects subjective rights.

Thus, the different legal and judicial scenarios that require strengthening regulatory regulations such as those proposed by the European Union to be carried out in Latin America and directly to their work environments where AI systems based on the production of services and products in a digitized and algorithmic way are used could be taken into consideration; where ethical values of business practice must be manifested of limits associated with the risk of their use for company employees, with models designed for commercial purposes.

In the face of the continuous evolution of AI that comes with challenges for social and legal institutions that are in the process of transforming justice and law due to the impact of the new digital revolution, in case new technologies appear to replace the current ones or to change their impact.

At the end of the day, the application of AI can reduce companies' emissions through the effect of technological innovation and the effect of labor substitution, which shows that AI has a more significant impact on companies in large cities and large companies. old companies and non-technology-intensive companies; which could be taken into consideration when establishing regulations for a business generality of commercial digitalization that precedes new scenarios of labor competitiveness, civil adoption and legal adaptation to the productive component of technology in the countries.

The regulation of AI is not only a legal challenge, but also a political one, and consequently requires legal frameworks that balance technological innovation with democratic governance , especially in Latin American contexts with high inequalities.

Research Question

For the reasons mentioned above, this narrative scope article aims to answer the following question: How is the impact of the Artificial Intelligence Regulation on Labour Competitiveness?

Method

This research is narrative, supported by systematic reviews of theoretical, situational and legal contributions that precede proposals for the regulation of AI in the context of labor competitiveness, according to the Artificial Intelligence Regulation (RIA hereinafter) model of the European Union that has been referred to by various authors, and whose questions have been compiled as evidence through thematic eligibility criteria; thus reducing information biases through authors who support a deep knowledge of the bibliographic as a resource for ordering research findings with research protocols, as mentioned in the Declaration of Helsinki with the ethical principles of data treatment in research.

In this sense, it is promoted to minimize bias through the use of explicit and systematic methods the selection of sources of scientific information collected from systematic reviews of research, both empirical quantitative and qualitative reviews on the RIA in environments of labor competitiveness in a narrative and descriptive way based on literary sources of information.

Therefore, articles have been selected that contextualize the implementation of the RIA in contexts of labor competitiveness in accordance with legal regulations associated with the ethical responsibilities of implementing AI-based systems in some countries, as well as the protection of citizens' data and the right to cybersecurity together with intellectual property protection. that they influence business decision-making to improve their productivity as well as the labor competitiveness of their employees; which led to the analysis of the proposals offered by authors

in articles published in the electronic databases: Web of Science, Scielo, Scopus, among other digital sources available in the Google Scholar search engine. The search algorithm included the words AI Regulation, AI Labor Competitiveness, and AI Incidence to Human Talent; in articles with Spanish and English, published between January 2018 and August 2024.

In the methodological analysis applied, it was started from the qualitative approach in a bibliographic design with which secondary data were used that showed results found by other authors in their scientific research; applying the technique of content analysis to create new knowledge from the collection and comparative interpretation of reported evidence, since it allows the researcher to interpret the knowledge provided by other studies related to the subject of the RIA in the labor competitiveness of companies under the model of the European Union, Asia and Latin America; in order to extract the necessary knowledge to expose the advances achieved in the regulation of AI with which an adequate regulatory process for Latin American companies can be deciphered.

Analysis of the Research

To answer the question, the study requires a documentary analysis sustained in the current literature regarding the processes of regulation of the roles that AI has had in the development of companies; as dictated by the European Union and its questioning reached in Latin American countries based on the European and Asian model, which together has had its own formulations in countries such as Chile, Ecuador, Brazil, among others, which are compared in their purpose of resolution and will be exposed in the research analysis segment according to the compilation of various studies that appear as background and theoretical support of the scenarios where the AI regulation can be considered for work environments.

In China, AI has experienced a significant boost although its rapid growth has generated concerns about energy sustainability, this case illustrates how the adoption of technology requires regulatory frameworks that balance innovation and labor law, in this sense civil and contractual liability emerges as a key pillar as the autonomy of AI systems challenges traditional damage attribution schemes. Around the world in recent years Despite this, its rapid growth has raised concerns about energy shortages due to its high energy consumption, despite its potential to conserve energy in various ways. Thus, research has been carried out on the impact of AI on business energy intensity (EI) by analysing data from Chinese listed manufacturing companies during the period 2011-2019, finding that the widespread adoption of AI can significantly reduce business EI, especially if an additional unit of industrial robots is incorporated that reduces business energy consumption per hundred workers by 2.5%.

This is significant in companies with high energy dependence, non-labor-intensive companies and public companies; which impacts labor competitiveness in an energy improvement for the organization that uses robotic AI to replace personnel and reducing significant energy costs in its transition to AI-based energy practices.

In turn, the widespread application of AI-based technology has triggered a significant transformation of the economic structure and brought about profound changes in society, which is why companies in China promote the digital transformation of industries, understand how investment in AI by small and micro enterprises (SMEs) affects labor demand, which is inextricably linked to "stable employment", being an important issue that merits analysing the strategies of governments and companies to deal with the impact on employment of AI applications based on empirical evidence that demonstrates that investment in labour is

questionable in the face of AI.

The implementation of artificial intelligence has represented a transformation that exceeds economic dynamics and that consequently has had an impact on the legal and philosophical frameworks associated with work, to this effect these changes have posed a key dilemma, proof of this is the valuation of civil liability associated with opaque algorithmic systems which in the context of their autonomy pulses against the traditional principles of labor law. To this end, within a context where critical decisions are delegated to artificial intelligence structures, it becomes imperative to rethink legal principles in order to ensure that workers' rights are not violated

Civil and contractual liability has historically been a pillar of labor law, based on the idea that the parties involved in the contractual relationship assume reciprocal obligations, subject to reparation mechanisms in the event of non-compliance, however, the irruption of artificial intelligence in labor decision-making radically alters this scheme since to whom the responsibility would be attributable when an algorithmic system adopts decisions that infringe labor rights

Through a legal vision, civil liability is based on the notion of fault or negligence, in this sense, the opacity of algorithmic constructions, which are called black box problems, serve as a barrier to the determination of the origin of the damage, for this, a dilemma arises that deals with the possibility of discrimination of a worker by the system during the selection process. In this sense, as it must be determined whether such discrimination is due to a bias in the training data, or if it corresponds to a defect in the central design of the algorithm, or if the responsibility lies with a deficient implementation by the employer, it is precisely the basis of this indeterminacy that can leave workers in a situation of vulnerability, and devoid of a clear remedy of challenge.

In the contractual field, the problem acquires even more complex nuances: the validity of an employment contract could be questioned if one of the parties delegates critical decisions to an artificial intelligence system, given that contracts by nature are based on mutual consent and the ability of the parties to understand the agreed conditions, this problem is aggravated in Latin America, where the insufficiency of specific regulatory frameworks to regulate artificial intelligence generates legal uncertainty and enhances labor conflicts .

In the face of these challenges, the principle of transparency emerges as an indispensable element in the regulation of artificial intelligence in the workplace, this principle is not only an ethical imperative, but also has an essential legal character, as it guarantees that workers understand how decisions that affect them are adopted and consequently can exercise their right to challenge them if they consider them arbitrary or discriminatory. Transparency in this sense is closely linked to the right to information and the guarantees of due process, fundamental pillars of any democratic legal system.

The demand for transparency in the implementation of artificial intelligence in the application to the workplace necessarily implies valuing that the algorithms applied are auditable, and that workers have access to decision-making criteria, coupled with this, the incorporation of the principle of transparency imposes the obligation to establish the criteria of justification for the implementation of artificial intelligence in the application of critical processes that they can trigger violations of labor rights and consequently perpetuate discrimination.

However, the effective implementation of the principle of transparency faces significant challenges, on the one hand, the tension between transparency and the protection of the

intellectual property of artificial intelligence developers can considerably limit access to key information about the algorithms, on the other hand the technical complexity of the systems can make it difficult for workers and even employers to fully understand how they work, which consequently dilutes the effectiveness of the principle of transparency.

The aforementioned questions constitute criteria for regulating the labor market that invests in AI and replaces employees with the automated system that refers to greater productivity for the company; although this is not equivalent to the same quality of service provision provided by the collaborators of an organization, and especially to the contact between people that is a determining factor in the acceptability of consumers when acquiring a product explained, demonstrated and proven by another person with experience in the field of work with sustainable development as offered by AI.

And this generates alternative variables for a company's audience, as the authors argue, although the magnitude of productivity of such services achieved from AI automation is generating new heterogeneity of consumers who do not depend on expert collaborators in their use, as well as regulatory policies aimed at the proper use of these systems, as Sánchez Acevedo (2024) points out. since AI has attracted global attention for its services offered on a performance basis due to the agglomeration of new industries with productive services.

For this reason, this article raises the need to analyze the impact of the RIA on labor competitiveness referred to by the aforementioned authors, in the face of the exponential growth of the industry supported by AI to offer new productive services without the need for labor for each area or department, and reducing hiring costs in processes other than a company with representation of human talent. which contributes to the economic performance of an industry supported by AI, and to control harmful effects in political, legal, labor and natural scenarios and its possible dependence on exhausting natural resources that have been able to reduce the intensity of consumption through the intensive technological intensity of a company, which promotes the implementation of public policies in line with industrial characteristics.

This can increase their commercial competitiveness depending on the sector to which they belong, however, this violates some labor rights of employees who lose jobs due to automation of their functions by AI by having access to all the information on the internet, programming of functions and reduction of corporate energy consumption.

For this reason, it seeks to regulate AI and the content selection algorithm, which is used for the execution of tasks that are licensed under copyright and intellectual property, citizen data and files stored with data collected by public or private institutions that can be violated by not having a regulation of the use of digital property in a margin of opportunities and registered sanctions.

While in the process, the effort of human talent in training, academic preparation and acquiring proven work experience is devalued among some aspects acquired by the preparation of a worker in his curricular experience that violates the work ethic for the social sustenance of jobs, compared to and surpassed by work carried out artificially in an algorithmic sequence of accelerated control that in turn innovates the ability to development of a company, aimed at an audience currently diversified in the commercialization of AI. Using AI algorithms, there is an urgent need to analyse the effects of control to advise companies on the best way to act.

Therefore, it leads to the potential for efficiency and competitiveness of businesses by improving more efficient decision-making with comparative results of various scenarios necessary to achieve through the benefit it brings to the automation of more dynamic processes, which are

required to accelerate expected results in order for the growth of the company of people who acquire and implement adaptive processes that seek to replicate acquired knowledge.

Therefore, in the process of regulatory regulation required by companies that operate with AI-based operating systems, they can sustain postulates based on ethical and moral guidelines for the management of information that must be able to be continuously reviewed by peers when there is an exponential emergence of knowledge structured in such technologies, with which a review by the scientific community is available with the application of systematically practical methods to report ethical and moral values in companies, whose purpose in the control of informative and decisive behavior generated by AI has a margin of veracity reported in the business environment, which requires interpretation of key results as well as the transparent processes reported of their models and responsibility with the decisions that have been automated that guarantees an ethical and effective use of AI.

At this point, the value of the representativeness of controls on AI that can fall on the functions of human talent in companies with AI is understood, reviewing the multidisciplinary training of personnel with adaptability in the face of innovative processes, especially in scenarios where automated processes are replaced by AI. and so human talent can be strengthened by technologies. This could represent equal opportunities for people who are workers, to have a legal mechanism that considers the regulations and laws that ensure justice according to facts that occur in various circumstances, and affects less advantaged workers who, due to their manifestation of ignorance, are not deserving of job opportunities. considering John Rawls' theory of justice.

In this way, an international cooperation agreement could be established, such as the one managed by the United Nations on the RIA process, where ideas, institutions, organizations and interests must be integrated in accordance with the contexts foreseen in the 2030 Agenda that require strategic and inclusive policies for access to and control of AI at the universal level. with support in achieving positive use in society. If an integration of AI models is achieved in support of gender equality and opportunities for human talent, as representatives of labor competitiveness achieved with technological support to improve performance and functions, without discrimination or gender violence, maintaining an equitable and fair perspective.

This reason leads us to consider how the management of public policies is taking place in the revolutionary concept of AI in various spheres of society, so the scenario in Colombia was taken into account, where the issue of AI within the forecasts of public policies is oriented to the formation of courses with directing actions promoting ethical and responsible use to emerging systems in AI , considering the State as the actor responsible for regulating, promoting and documenting the advances of AI so that a legal framework of regulated ethics in AI is reported for the benefit of social needs. Which, in turn, promotes critical, reflective and ethical thinking in the multidisciplinary that encompasses AI among social challenges.

Therefore, the regulation of algorithms and data collected from AI, refers to a competence of understanding and interpretation of emotions and AI in the same field of actions, relationships and tasks of life where it has been incorporated, and in turn is fed by emotional information released by users in digital scenarios. whose regulatory scope prevails in the face of acts of manipulation and modification of people's behavior among the related risks to human rights.

At the same time, they are related to the fact that the people who work in companies that replace human talent with machinery are also compromised and must carry out adaptation processes to

match technology and not be obsolete in the face of the advances offered by AI in times of changes to the technological industry integrated into other industries. and whose innovation processes are accepted in the leadership skills necessary for these times.

According to the need for regulation of new technical, economic, social, technological and scientific scenarios that merit a relevant study of each administrative process that integrates the managerial functioning adapted to the needs of inclusion of AI; and that currently represents an integration into the daily work of people in their change of human condition and that has presented legal and ontological problems with which lifestyles have been altered and weakens the process of construction of their own realities.

Discussion

For this segment of the review article, it has been possible to understand different theoretical, empirical, methodical, scientific, academic, business and legal postulates on the subject of human talent and regulation of AI for the labor competitiveness of companies, consequently, companies that use AI systems to improve their labor competitiveness resort to a technological resource that merits regulation provided by the National Council of their country, which could regulate the disclosure of original content of their products or services with data transparency and responsibility for their use or content to their consumers.

Since the absence of regulatory control over companies that use AI, entails a detriment to the reliability of people who acquire products or services from companies by falling into information and computer deception, because AI can record and manipulate data obtained from people, it is therefore meritorious to have regulatory provisions to officially regulate the use of such systems in companies for the protection of public and private data.

The discussion of analyses presented above, demonstrate that the technological industries have advanced in an emerging way to various social, cultural, labor, business, economic, political and legal aspects in the process that is carried out with the RIA from the Council of the European Union, Asia and America.

In the context of Latin America, its advances in public policies for the regulation of AI have been presented in the incidence of construction of social realities, cultural interactions, jobs and the human rights of those who cannot adopt technology to the capabilities of usability and adaptability to the work environment. which has an impact on the way in which labor competitiveness is offered in companies, following models of maximization of productivity, reduction of costs and energy consumption, as well as profitability of automated processes with rapid adaptation capacities in continuous improvement processes.

The RIA requires multilevel intervention: algorithmic auditing, data protection and job training policies, considering fundamental aspects such as the registration and transparency of the data stored and interpreted by the AI for the verification of its content in time for regulation and auditing, enabling the implementation of public policies to institutions, companies as well as groups of people of diverse social and non-governmental names merits for the ability to integration and controls over AI systems in various public or private instances, since in the field of education it refers to the substitution of teaching processes that from teachers must be transmitted and passed through to students to new emerging labor fields from universities due to the demand for job positions consequent to the provisions of AI usability, that from its programmed algorithm phase in a sequence of learning from events, a race against time is made to advance in solid regulations imposed on its commercial or non-commercial use.

Conclusions

To conclude this article, mention is made of the various comparative processes of ideas that are held from the European version and vision of the Asian one in terms of the protection of human rights vs. the protection of the comparable advantages that AI brings to quantifiable data processes, reproduction of processes and ability to modulate various algorithms according to the tasks they perform. merit in-depth observation by academics and managers of multidisciplinary teams who consider the validation of data sources regulated by companies, according to their margin of competitiveness based mainly on AI than on human talent, as well as their training strategies and adoption by personnel.

In the face of the unavoidable advance of artificial intelligence in labor processes, Latin America cannot limit itself to being a passive consumer of regulatory frameworks designed in other contexts, although the European regulation offers an advanced legal architecture, its automatic transplanted would be ineffective and even risky since a critical appropriation anchored to the social and labor realities of Latin America is needed. and that is based on the conceptual and philosophical principles of equity and distributive justice, a proposal of this is the Rawlsian theory that allows to go beyond technical regulation and place the dignity of human work at the center of the debate, consequently from this perspective artificial intelligence should not be presented as a threat to employment, but rather, an opportunity to rethink work with justice, ethics and social sense, to this end the task is to build a Latin American framework of its own, with broad participation, democratic supervision and sensitivity to the structural inequalities of the region.

Therefore, a level of incidence of the Artificial Intelligence Regulation on Labor Competitiveness could be determined, considering that the RIA supports the main functions of scientific, ethical, moral, transparent criteria and with a record of processed data on the content of information from third parties to companies and institutions where the AI modeled system may be adopted to maximize the efficiency of some processes. which require the presence and work of groups of reviewers, analysts and scientific-academic validators in companies, with a margin of fiscal audit, human resources reporting and financial analysis consistent with the legal margins in which public policies have an effect.

The RIA must be integrated into national political agendas, not only as technical regulations but as tools for social justice, articulating labor rights with economic development strategies.

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