

**Leaving No-one Behind in the Workplace Health Promotion: Towards Regulatory  
Equity in the Ecuadorian Micro-enterprises**

Antonio R. Gómez-García  
Universidad Espíritu Santo UEES (Ecuador)  
Samborondón, Samborondón Avenue, 5, 092301  
E-mail: [agomezg@uees.edu.ec](mailto:agomezg@uees.edu.ec)  
Phone: +593 0998404670  
ORCID #: 0000-0003-1015-1753

Alywin Hacay Chang  
Universidad Politécnica de Valencia (Spain); Universidad Espíritu Santo (UEES, Ecuador)  
Email: [ahacay@uees.edu.ec](mailto:ahacay@uees.edu.ec)  
ORCID: <https://orcid.org/0000-0002-5383-0951>

Richard Oswaldo Valenzuela-Mendieta  
Observatorio Ecuatoriano de Seguridad y Salud en el Trabajo (OESST, Ecuador)  
Email: [rvalenzuelam@uees.edu.ec](mailto:rvalenzuelam@uees.edu.ec)  
ORCID: <https://orcid.org/my-orcid?orcid=0000-0002-9554-1250>

José A. García-Arroyo\*  
Universidad Espíritu Santo (UEES, Ecuador);  
Universidad Internacional de la Rioja (UNIR, Spain)  
E-mail: [jagarciaa@uees.edu.ec](mailto:jagarciaa@uees.edu.ec)  
[joseantonio.garcia@unir.net](mailto:joseantonio.garcia@unir.net)  
Phone: +34 638576646  
ORCID #: 0000-0001-9905-1374

\*Corresponding author: this author will handle correspondence at all stages of refereeing and publication, as well as post-publication.

**Abstract**

Workplace Public Health programs and Regulations intend to promote safety and health by covering the working population nationwide. However, their contents are sometimes limited to medium or big-sized companies, leaving out of scope small and micro-enterprises, which discriminates against many workers exposed to risk factors. This document aims to reveal the inequalities in occupational health generated by the new Regulation for Workplace Health Promotion (WHP) in Ecuador. The paper begins with a brief review of the successive laws on job safety and health developed in the country, showing how they exclude micro-enterprises from their scope. Later, the significance of micro-enterprises, which have usually been unconsidered by health regulations, and the implications related to their health are shown. Finally, it is discussed some specific challenges that could condition the application and feasibility of the WHP, and a call to support micro-enterprises is made.

**Keywords:** Workplace Health Promotion, Micro-enterprises, Inequity

## **Introduction**

The optimal state of health is considered one of the most significant resources for countries' personal, economic, and social progress. Public policies have influenced the population's general morbidity, mortality, and quality of life, particularly of workers [1]. Workplace Health Promotion (WHP), embraced from the public health perspective to the modern business environment [2], is a value-added strategy for practicing healthy habits, behaviours, and lifestyles in which employers, workers, and society collaborate. Thus, the WHP has gradually been incorporated as an essential goal within government policies. This document aims to reveal the inequalities in occupational health generated by the new Regulation for WHP in Ecuador. This article is structured in three sections. First, we describe the historical development of the WHP in Ecuador. Afterwards, we show the significance of micro-enterprises, which have usually been unconsidered by health regulations, and the implications related to their health. Thirdly, we discuss some specific problems that could condition the application and feasibility of the WHP, and we end by making a call to support micro-enterprises.

## **Historical development of the WHP in Ecuador**

The recognition of the workplace as enabling and key environment to success in improving health dates back to the First International Conference on Health Promotion in 1986 (called the Ottawa Charter). This status has been maintained in subsequent world conferences (see Figure 1). In all of them, the countries are encouraged to develop healthy public policies, create favourable environments for health, develop personal skills, reinforce community action, and reorientate health services [3].

In this sense, equity in health is a must, as a universally recognised imperative, oriented towards social justice to "leave no one behind" as expressed by the Millennium Development Goals 2000-2015 and present in the Development Goals (SDGs) – 2030

Agenda [4]. Although these international influences have been present in the public agendas of most low- and middle-income countries [5], no improvement in population health has currently been observed [6]. In the case of European countries - pioneers with the creation of the European Network for Workplace Health Promotion in 1996, ENWHP -, the implementation of WHP in companies has not been entirely satisfactory [7].

The most important reference on WHP in Latin American countries appeared in Costa Rica in 2000 with the Strategy for the Promotion of Health in the Workplaces of Latin America and the Caribbean [8]. This document claims the need to offer WHP Plans for all people involved in the workplace - without exceptions - that favour the productivity and competitiveness of companies and contribute to the economic and social development of countries. Small companies (many of them with less than 20 workers) are considered extremely important due to the contribution of their labour force to the economies of the region's countries. At the same time, the prioritisation of actions aimed at WHP is highlighted, considering those economic sectors in the most critical safety conditions and workers with the worst state of health.

In the Ecuador legislation, the principles for the WHP date back to 1978 with the Regulation for the Operation of Medical Services of Companies (Ministerial Agreement No. 1404/1978, October 25), following Recommendation 112 on Occupational Medicine Services of the International Labour Organization in 1959. This Regulation promotes workers' health from the conception of comprehensive health to improve the quality of life through three health items: physical, mental, and social [9].

Also, an important precedent was the Institutional Policy for Occupational Safety and Health and the Health and Safety Management System (Ministerial Agreement No. 00213/2002, October 23). Although this policy had more shadows than lights [10], it

considered coordinated actions to guarantee the right to health at work in the most vulnerable populations. To this day, we are unaware of its implementation or evaluation.

The first National Occupational Health Policy 2019-2025 materialised from the Ministry of Public Health initiative in 2019 (Ministerial Agreement No. 0347/2019, May 20). This moment is considered a historic milestone in occupational health and safety for the country [11]. It establishes different lines of action with a broad scope in the WHP since it includes the working population in the formal and informal economy sectors. Albeit with certain ambiguities regarding its content, Strategic Line number 2 emphasises the need to promote "Healthy Work Environments" through WHP Plans that foster healthy lifestyle habits and practices among workers in public and private companies and institutions. However, its scope is limited to medium and large-sized companies (more than 50 workers). The background of said National Policy was based on the National Development Plan 2017-2021 with the motto "Toda una Vida" ("A whole lifetime") and the Comprehensive Family, Community, and Intercultural Health Care Model. Promoting the well-being and health of the working population in the most unfavourable conditions are the pillars on which this National Policy is based. This policy served for the country to adhere to the international commitments by the Plan of Action on Workers' Health 2015-2025 of the Pan American Health Organization and the United Nations SDGs.

More than a year after the start of the global pandemic caused by COVID-19, the Healthy Work Environments Manual was published in mid-2021 with the expression "Agita tu Mundo" ("Shake up your World") (Ministerial Agreement No. 00030/2021, dated 30 June). This new appeal to the WHP for a healthier life incorporates the implementation proposal in 7 lines of action: healthy eating, physical activity, sustainable mobility, mental health, prevention of harmful consumption, sexual and reproductive health, and breastfeeding promotion. These lines were supported by the need to reduce the high social and economic

costs of chronic non-communicable diseases in Ecuadorians between 30 and 70 years old. As expected, the workplace was considered the most promising location for carrying out interventions aimed at promoting health. This initiative was nationwide for public and private companies of all productive sectors, although limited to medium and large companies.

At the end of 2022, and without having, as far as we know, an assessment report, the "Shake up your World" initiative was repealed by the current Regulation for the Promotion of Health at Work (Ministerial Agreement No. 00049/2022, of November 14) with a new motto "Actívate y Vive" ("Activate and Live"). Chronic non-communicable diseases continue to stand out as a severe public health problem. For example, two out of three Ecuadorians between the ages of 19 and 60 are overweight or obese.

This new regulation compels public and private workplaces with 25 or more workers to implement a WHP Plan that contributes to comprehensive well-being and adjusts to the particular needs of the health status of its working population. For this Regulation, workplaces are defined as those "places where workers go and stay during their working hours..." and that is "...constituted by natural persons, companies, institutions, public companies, organisations of the popular and solidarity economy, and citizen security and public order entities" (Article 3.- Definitions).

Since this definition is unclear, we assume that work centres refer to companies. This terminological inconsistency had sparked debates in legal bodies before. For example, workplace, company, organisation, and establishment have been used interchangeably, including environment or workspace [12]. In this way, and considering the work centres as companies, Micro-enterprises (with less than or equal to 9 workers) and, to a certain extent, small companies (between 10 and 49 workers) would be expressly excluded. These exception criteria, a priori lacking a solid and rational argument, have also been observed in other European policies [13], and it contrasts with the III Ibero-American Strategy for Safety and

Health at Work 2021-2025, which especially mentions the need to consider micro-enterprises as they represent a majority in the regional business network. The chronological evolution of the WHP regulations internationally and in Ecuador is shown in Figure 1.

[insert - Figure 1. Chronological evolution of the WHP regulations internationally and in Ecuador - here]

### **Significance of micro-enterprises in Ecuador**

Micro-enterprises constitute an essential social alternative in our country as they generate employment and accelerate economic development [14, 15]. However, it has been found that workers in micro-enterprises are prone to the risk of work-related injuries, illnesses, and health problems due to their social and economic conditions [16, 17]. Further, these workers' health has worsened owing to the COVID-19 pandemic [18]. In addition, micro-enterprises are less supervised by labour inspectors, especially in certain economic activities and specific territories of the country, enabling them to fail to comply with the prevention and promotion of occupational safety and health regulations [19]. If micro-enterprises are not considered in the public policies on WHP [20, 21], some questions arise that deserve to be answered:

**Question 1:** What proportion of workers will be affected by the exclusion of micro-enterprises in the 2022 WHP Regulation?

**Question 2:** What will be the (a) economic sectors and (b) the provinces most affected by this exclusion?

### **Method**

To answer these questions, we consulted the Ecuadorian business structure by workforce size (number of workers) from administrative records published by the National Institute of Statistics and Censuses stratified by economic sectors and by the 24 provinces that make up the national territory [22]. Specifically, the data comes from the Statistical

Registry of Companies for 2022, which offers reliable information on the number of active companies by workforce size and an annual average of registered employment (workers affiliated with the Social Security Protection system).

To answer Question 1, the percentage of companies by size (micro-enterprises, small, medium, and large enterprises) of the total number of registered companies was calculated. Again, to know the proportion of workers affected by the exclusion of microenterprises in the WHP 2022 Regulation, the percentage of workers in each type of company was estimated according to its size out of the total number of registered workers. Similarly, to answer Question 2, the following estimates were calculated. Regarding the sector of economic activity that is most affected by the exclusion of micro-enterprises from the 2022 WHP Regulation, the percentage of employees who work in micro-enterprises over the total number of registered employees was calculated according to the sector of economic activity. To answer which geographical province is the most affected, the percentages of micro-enterprise employees in each province over the total number of registered employees in each province were calculated.

## **Results**

***Response to Question 1.*** In 2022, 863,681 companies were registered nationwide, of which 93.9% were micro-enterprises and 4.4% were small companies. Less than 2% were medium or large companies. At the same time, out of the 2,753,789 registered workers (not including the population employed in the informal economy), 25.2% (692,884 workers) work in micro-enterprises, and 15.4% (420,840 workers) work in small companies. In comparison, 59.4% (1,636,399 workers) work in medium or large companies. That is, responding to research question 1, more than 25% (a quarter) of the active population in the formal economy has been forgotten (excluded) by the 2022 WHP Regulations (see Figure 2).



[insert here - Figure 2. Percentage distribution of enterprises and registered employment.

Total of enterprises = 863,68; Total of workers in the formal economy = 2,753,789. Source: National Institute of Statistics and Censuses, 2022.]

**Response to Question 2.** Figure 3.1 shows the percentage of the employed population of micro-enterprises over total registered national employment (annual average, 2022) by economic sector. It should be noted that a high percentage of micro-enterprises employees work in real estate activities (69.3%), other services (64.8%), the scientific-technical sector (58%), transport companies (49.5%) and hotels (45.6%). These figures indicate that the WHP Regulation 2022 mainly affects employees of micro-enterprises in the commercial and service sectors, whose activities are essential to the country's economy [14]. In turn, the proportion of workers in micro-enterprises in sectors such as manufacturing, agriculture, the energy and extraction industry (energy distribution, mining and quarrying), and financial activity is lower compared to the total number of workers in larger companies and therefore, the exclusion effect of the 2022 WHP Regulation is lower in these sectors.

Regarding the provinces (Question 2 b), Figure 3.2 shows the proportion of workers in micro-enterprises in relation to the total number of workers in each province. Except for undelimited areas, this proportion varies between 39.9% (Galapagos) and 19.1% (Guayas). This proportion is higher in the Insular region (Galápagos, 39.9%) and in some provinces of the Andean region (Tungurahua - 38.9%, Cañar - 38.3%, Carchi - 37.2%, Chimborazo - 36.5%, and Bolívar - 35.4%) and is lower in the provinces of the Amazon and the Coastal region. In absolute terms, and as expected, the number of micro-enterprise workers per province increases with the number of workers registered in each province, so these two variables correlate positively ( $r = .90$ ;  $p < .001$ ). However, in relative terms, the percentage of

micro-enterprise workers is proportionally lower in those provinces with more registered workers than in those with fewer registered workers ( $R^2 = .26$ ). (see Figure 3.2).

[insert - Figure 3. % of employees in Micro-enterprises by sectors of economic activity (3.1) and the provinces (3.2) - here]

## **Discussion**

This document aimed to reveal the inequalities in occupational health generated by the new Regulation for the WHP in Ecuador. To this end, a brief review of the successive laws on job safety and health developed in the country has been made, showing how they all exclude micro-enterprises from their scope. We have also displayed the essential role of micro-enterprises in the business fabric and the Ecuadorian labour market. Thus, it has been shown that more than 93% of the registered companies are micro-enterprises and that they include more than 25% of the employees in the formal economy. Therefore, the 2022 WHP Regulations exclude more than a quarter of the country's workforce, constituting a significant public policy issue. It has also been shown how the employees affected by these exclusions are mainly concentrated in essential activity sectors for the country [14], such as commercial and services. Considering the geographical distribution, although there is a positive correlation between the total number of employees and the number of employees in micro-enterprises, the proportion of employees in micro-enterprises is lower in those provinces with a larger registered working population. Thus, the provinces with the highest number of employees in micro-enterprises and most unprotected by the 2022 WHP Regulations are those of the Insular and the Andean regions. These provinces are characterized by great poverty, inequality, and worse working conditions, although the differences between

provinces are minimal [19, 23, 24]. Next, we discuss some challenges for micro-enterprises and end with a call for attention to the importance of WHP in micro-enterprises.

***Challenges for Micro-enterprises.*** The available evidence on the effectiveness of the implementation of WHP Plans is scarce and inconsistent in smaller companies [25, 26]. In the case of micro-enterprises, several reasons explain why the development of WHP is less likely [27, 28]. The most important motive is the limited economic resources - budget [29] and the absence of tax incentives [30]. Also, the return on WHP investment is weak [31, 32]. Additionally, micro-enterprises may prioritize other, more critical needs, such as survival and sustainability as a business [33].

Furthermore, recent literature reveals that difficulties in continuing WHP programs for micro-enterprises are due to weak employer leadership [34, 35] and the workers' lack of willingness and commitment [36 - 39]. Faced with these and other challenges, the need arises to offer aid viable alternatives to micro-enterprises' real needs and possibilities that allow the successful implementation of WHP Plans [40, 20, 34, 41]. Based on the background of the Spanish Network of Healthy Companies, large companies could transfer their WHP good practices and experiences to smaller ones [42].

***Reflection and action.*** Little doubt exists that public policies are oriented to achieve the population's health through fair and equitable Regulations [43]. However, one usual error of these policies has been insufficient attention to specific populations, mainly the most disadvantaged, for some reasons complex to explain [44]. In the case of Ecuador, the WHP is recent and has evolved chronologically with some delay concerning international trends. We have shown that smaller companies have sometimes been excluded from the scope of Regulations throughout history, leading them even to increased health inequalities [45]. This paper's purpose was to make a thoughtful and well-founded call for attention to the importance of WHP in micro-enterprises. Although we have not reached the point of

proposing specific alternatives, we consider the need to standardize WHP regularization for all company sizes. In defence of Ecuadorian micro-enterprises toward equity, we urge national actors to reconsider this issue. However, this action requires deep analysis to integrate occupational health into the public health system [46] and avoid the lack of protection for the working population.

### **Conflict of Interest Statement**

On behalf of all authors, the corresponding author states that there is no conflict of interest.

## References

1. Blacker A, Dion S, Grossmeier J, Hecht R, Markle E, Meyer L, et al. Social determinants of health, an employer priority. *Am J Health Promot* 2020; 34:207–15.  
<https://doi.org/10.1177/0890117119896122b>
2. Marqués Marqués F. Health promotion: a component for business competitiveness. *Arch Prev Riesgos Labor* 2014; 17:185–7. <https://doi.org/10.12961/apr1.2014.17.4.01>
3. Nutbeam D, Corbin JH, Lin V. The continuing evolution of health promotion. *Health Promot Int* 2021; 36: i1–3. <https://doi.org/10.1093/heapro/daab150>
4. Gulis G. Health impact assessment and the sustainable development goals. *Health Promot Int* 2019; 34:373–5. <https://doi.org/10.1093/heapro/daz052>
5. Cislighi B, Heise L. Using social norms theory for health promotion in low-income countries. *Health Promot Int* 2019; 34:616–23. <https://doi.org/10.1093/heapro/day017>
6. Wingood GM, DiClemente RJ. Accelerating the evolution of health promotion research: Broadening boundaries and improving impact. *Am J Public Health* 2019; 109: S116.  
<https://doi.org/10.2105/AJPH.2019.304991>
7. Motalebi G. M, Keshavarz Mohammadi N, Kuhn K, Ramezankhani A, Azari MR. How far are we from full implementation of health-promoting workplace concepts? A review of implementation tools and frameworks in workplace interventions. *Health Promot Int* 2017: daw098. <https://doi.org/10.1093/heapro/daw098>
8. Partanen TJ, Loría-Bolaños R, Wesseling C, Castillo C, Johansson KM. Perspectives for workplace health promotion in Latin America and the Caribbean. *Int J Occup Environ Health* 2005; 11:313–21. <https://doi.org/10.1179/107735205800245993>
9. Ohrnberger J, Fichera E, Sutton M. The relationship between physical and mental health: A mediation analysis. *Soc Sci Med* 2017; 195:42–9.  
<https://doi.org/10.1016/j.socscimed.2017.11.008>

10. Toro Toro J, Valencia Abundiz S, Ocegüera Ávalos A. Marco legal e institucional de la seguridad y salud ocupacional en el Ecuador. *Acta Republicana. Política y Sociedad* 2014; 13:101–109.
11. Gómez García AR. Safety and health at work in Ecuador. *Arch Prev Riesgos Labor* 2021; 24:232–9. <https://doi.org/10.12961/aprl.2021.24.03.01>.
12. Lindberg P, Vingård E. Indicators of healthy work environments--a systematic review. *Work* 2012; 41 Suppl 1:3032–8. <https://doi.org/10.3233/WOR-2012-0560-3032>
13. Verra SE, Benzerga A, Jiao B, Ruggeri K. Health promotion at work: A comparison of policy and practice across Europe. *Saf Health Work* 2019; 10:21–9. <https://doi.org/10.1016/j.shaw.2018.07.003>.
14. Anzules-Falcones W, Diaz-Marquez AM, Padilla L, Hernan-Hidalgo D, Sanchez-Grisales D, et al. Foresight for small and medium enterprises in the context of the circular economy. *Foresight-Russ* 2021; 15:86–96. <https://doi.org/10.17323/2500-2597.2021.1.86.96>
15. Moreno A, Martinez D, Fabián Rivera E, Renato Mauricio Toasa G. Starting an E-commerce in pandemic times to Ecuador: A review of the current state of affairs. In Reis, J.L., Peter, M.K., Cayolla, R., Bogdanović, Z. (eds) *Marketing and Smart Technologies. Smart Innovation, Systems and Technologies*, vol 280. Springer, Singapore. 2022, p. 635–44. [https://doi.org/10.1007/978-981-16-9272-7\\_52](https://doi.org/10.1007/978-981-16-9272-7_52)
16. Ingram M, Wolf AMA, López-Gálvez NI, Griffin SC, Beamer PI. Proposing a social ecological approach to address disparities in occupational exposures and health for low-wage and minority workers employed in small businesses. *J Expo Sci Environ Epidemiol* 2021; 31:404–11. <https://doi.org/10.1038/s41370-021-00317-5>

17. Nowrouzi-Kia B, Nadesar N, Casole J. Systematic review: Factors related to injuries in small- and medium-sized enterprises. *Int J Crit Illn Inj Sci* 2019; 9:57–63.  
[https://doi.org/10.4103/IJCIIS.IJCIIS\\_78\\_18](https://doi.org/10.4103/IJCIIS.IJCIIS_78_18)
18. Honan J, Ingram M, Quijada C, Chaires M, Fimbres J, Ornelas C, et al. Understanding the impacts of the COVID-19 pandemic on small businesses and workers using quantitative and qualitative methods. *Ann Work Expo Health* 2023; 67:87–100.  
<https://doi.org/10.1093/annweh/wxac048>
19. Gómez-García AR, Vega Chica ML, García-Arroyo JA. Relationship between the territorial distribution of labor inspectors and work accident injuries: Clustering Ecuadorian provinces into four management scenarios. *Saf Sci* 2023; 158:105956.  
<https://doi.org/10.1016/j.ssci.2022.105956>
20. Kauppinen T, Rantanen J. Work and health country profiles and national surveillance indicators in occupational health and safety. *Appl Occup Environ Hyg* 2002; 17:603–5.  
<https://doi.org/10.1080/10473220290095907>.
21. Moreira S, Vasconcelos L, Santos CS. Sustainability of green jobs in Portugal: a methodological approach using occupational health indicators. *J Occup Health* 2017; 59:374–84. <https://doi.org/10.1539/joh.17-0045-ra>.
22. National Institute of Statistics and Censuses. INEC publishes employment figures for April 2023. National Institute of Statistics and Censuses n.d.  
<https://www.ecuadorencifras.gob.ec/inec-publica-cifras-de-empleo-de-abril-2023/>  
(accessed on June 17, 2023).
23. Quintana-Romero L, Correa-Quezada R, Ramón-Mendieta M, Álvarez-García J. Sectoral regional growth and convergence in Ecuador: An analysis of the intra-distributive dynamics of productivity. *Symmetry (Basel)* 2019; 11:461.  
<https://doi.org/10.3390/sym11040461>

24. Rios Quituizaca P, Gatica-Domínguez G, Nambiar D, Ferreira Santos JL, Brück S, Vidaletti Ruas L, et al. National and subnational coverage and inequalities in reproductive, maternal, newborn, child, and sanitary health interventions in Ecuador: a comparative study between 1994 and 2012. *Int J Equity Health* 2021; 20:48. <https://doi.org/10.1186/s12939-020-01359-1>.
25. Biswas A, Begum M, Van Eerd D, Johnston H, Smith PM, Gignac MAM. Integrating safety and health promotion in workplaces: A scoping review of facilitators, barriers, and recommendations. *Health Promot Pract* 2022; 23:984–98. <https://doi.org/10.1177/15248399211028154>
26. Wolfenden L, Goldman S, Stacey FG, Grady A, Kingsland M, Williams CM, et al. Strategies to improve the implementation of workplace-based policies or practices targeting tobacco, alcohol, diet, physical activity and obesity. *Cochrane Database Syst Rev* 2018; 11:CD012439. <https://doi.org/10.1002/14651858.CD012439.pub2>
27. Fetherman DL, McGrane TG, Cebrick-Grossman J. Health promotion for small workplaces: A community-based participatory research partnership. *Workplace Health Saf* 2021; 69:7–14. <https://doi.org/10.1177/2165079920938298>
28. Saito J, Odawara M, Takahashi H, Fujimori M, Yaguchi-Saito A, Inoue M, et al. Barriers and facilitative factors in the implementation of workplace health promotion activities in small and medium-sized enterprises: a qualitative study. *Implement Sci Commun* 2022; 3:23. <https://doi.org/10.1186/s43058-022-00268-4>
29. Pham CT, Phung D, Nguyen TV, Chu C. The effectiveness of workplace health promotion in low- and middle-income countries. *Health Promot Int* 2020; 35:1220–9. <https://doi.org/10.1093/heapro/daz091>

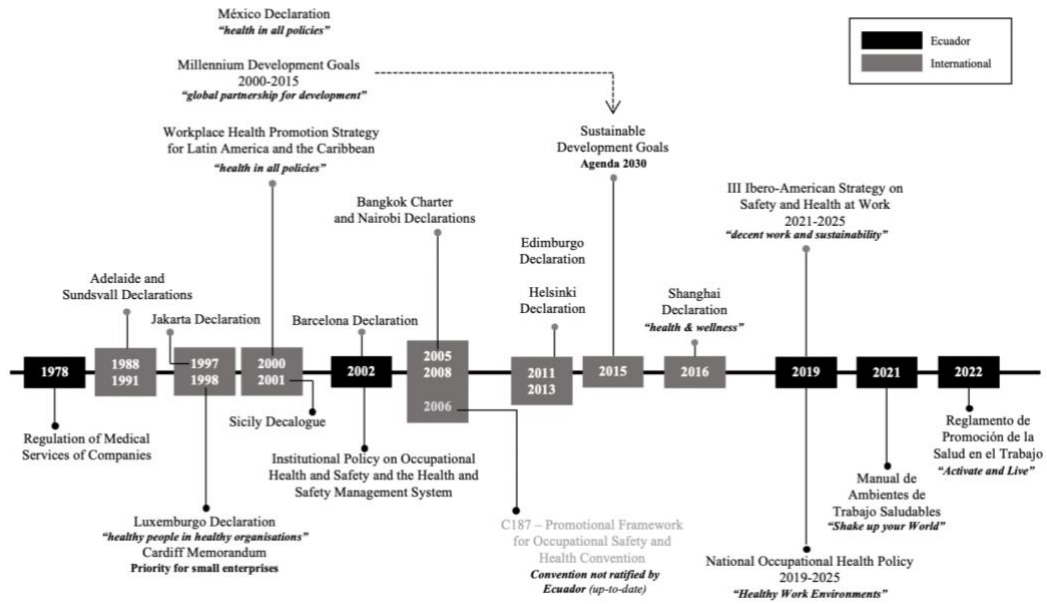


30. Taylor AW, Pilkington R, Montgomerie A, Feist H. The role of business size in assessing the uptake of health-promoting workplace initiatives in Australia. *BMC Public Health* 2016; 16:353. <https://doi.org/10.1186/s12889-016-3011-3>
31. Baxter S, Sanderson K, Venn AJ, Blizzard CL, Palmer AJ. The relationship between return on investment and quality of study methodology in workplace health promotion programs. *Am J Health Promot* 2014; 28:347–63. <https://doi.org/10.4278/ajhp.130731-LIT-395>.
32. Lerner D, Rodday AM, Cohen JT, Rogers WH. A systematic review of the evidence concerning the economic impact of employee-focused health promotion and wellness programs. *J Occup Environ Med* 2013; 55:209–22. <https://doi.org/10.1097/JOM.0b013e3182728d3c>.
33. Cherniack M. Integrated health programs, health outcomes, and return on investment: measuring workplace health promotion and integrated program effectiveness: Measuring workplace health promotion and integrated program effectiveness. *J Occup Environ Med* 2013; 55: S38-45. <https://doi.org/10.1097/JOM.0000000000000044>
34. McCoy K, Stinson K, Scott K, Tenney L, Newman LS. Health promotion in small business: a systematic review of factors influencing adoption and effectiveness of worksite wellness programs. *J Occup Environ Med* 2014; 56:579–87. <https://doi.org/10.1097/JOM.0000000000000171>.
35. Schwatka NV, Dally M, Shore E, Tenney L, Brown CE, Scott JG, et al. Small + Safe + Well: lessons learned from a Total Worker Health® randomized intervention to promote organizational change in small business. *BMC Public Health* 2022; 22:1039. <https://doi.org/10.1186/s12889-022-13435-y>
36. Brown MC, Harris JR, Hammerback K, Kohn MJ, Parrish AT, Chan GK, et al. Development of a wellness committee implementation index for workplace health

- promotion programs in small businesses. *Am J Health Promot* 2020; 34:614–21.  
<https://doi.org/10.1177/0890117120906967>
37. Hall JL, Kelly KM, Burmeister LF, Merchant JA. Workforce characteristics and attitudes regarding participation in worksite wellness programs. *Am J Health Promot* 2017; 31:391–400. <https://doi.org/10.4278/ajhp.140613-QUAN-283>
38. Kava CM, Ruiz RA, Harris JR, Hannon PA. Worksite tobacco control - a qualitative study on perspectives from employers and employees at small worksites. *BMC Public Health* 2022; 22:904. <https://doi.org/10.1186/s12889-022-13346-y>
39. Schwatka NV, Smith D, Weitzenkamp D, Atherly A, Dally MJ, Brockbank CVS, et al. The impact of worksite wellness programs by size of business: A 3-year longitudinal study of participation, health benefits, absenteeism, and presenteeism. *Ann Work Expo Health* 2018; 62: S42–54. <https://doi.org/10.1093/annweh/wxy049>.
40. Cunningham T, Jacklitsch B, Richards R. Intermediary perspectives on total worker health in small businesses. *Int J Environ Res Public Health* 2021; 18.  
<https://doi.org/10.3390/ijerph181910398>.
41. Newman LS, Tenney L. Total Worker Health® approaches in small- to medium-sized enterprises. *Total worker health*, Washington: American Psychological Association; 2019, p. 161–77.
42. Marqués Marqués F. La salud integral de los trabajadores un reto para la sostenibilidad empresarial. *Seguridad y salud en el trabajo* 2017; 90:14–23.
43. Pelletier KR. A review and analysis of the clinical- and cost-effectiveness studies of comprehensive health promotion and disease management programs at the worksite: 1998–2000 update. *Am J Health Promot* 2001; 16:107–16.  
<https://doi.org/10.4278/0890-1171-16.2.107>

44. Thomson K, Hillier-Brown F, Todd A, McNamara C, Huijts T, Bambra C. The effects of public health policies on health inequalities in high-income countries: an umbrella review. *BMC Public Health* 2018; 18. <https://doi.org/10.1186/s12889-018-5677-1>
45. Frank J, Abel T, Campostrini S, Cook S, Lin VK, McQueen DV. The Social Determinants of health: Time to re-think? *Int J Environ Res Public Health* 2020; 17:5856. <https://doi.org/10.3390/ijerph17165856>
46. García AM, Benavides FG, Pérez R, Delclos E, Ruiz Frutos GL. La plena (y necesaria) integración de la Salud Laboral en la Salud Pública [The full (and necessary) integration of Occupational Health into Public Health. *Revista española de salud pública* 2021; 95. <http://hdl.handle.net/10045/119644>

Figure 1.



Chronological evolution of the WHP regulations internationally and in Ecuador

Figure 2.

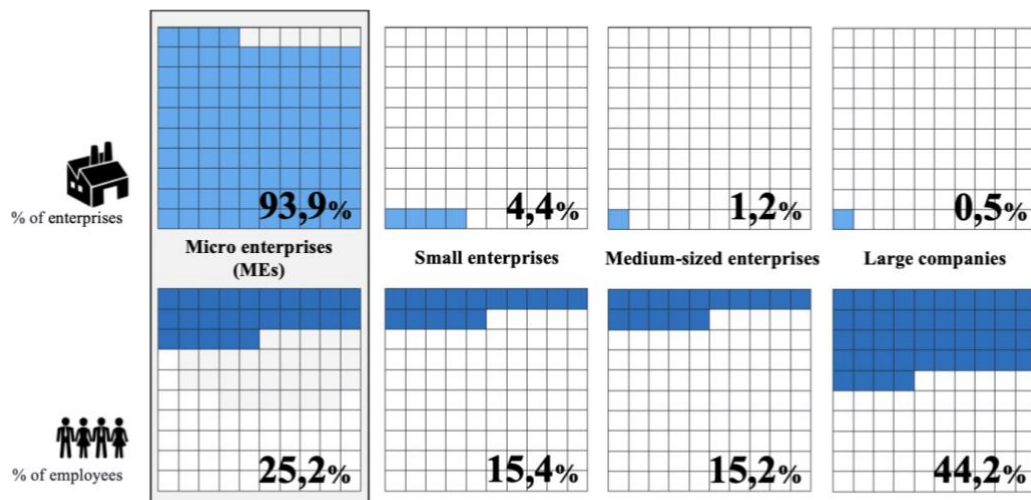


Figure 2. Percentage distribution of enterprises and registered employment.  
 Total of enterprises = 863,68; Total of workers in the formal economy = 2,753,789.  
 Source: National Institute of Statistics and Censuses, 2022.

Figure 3.

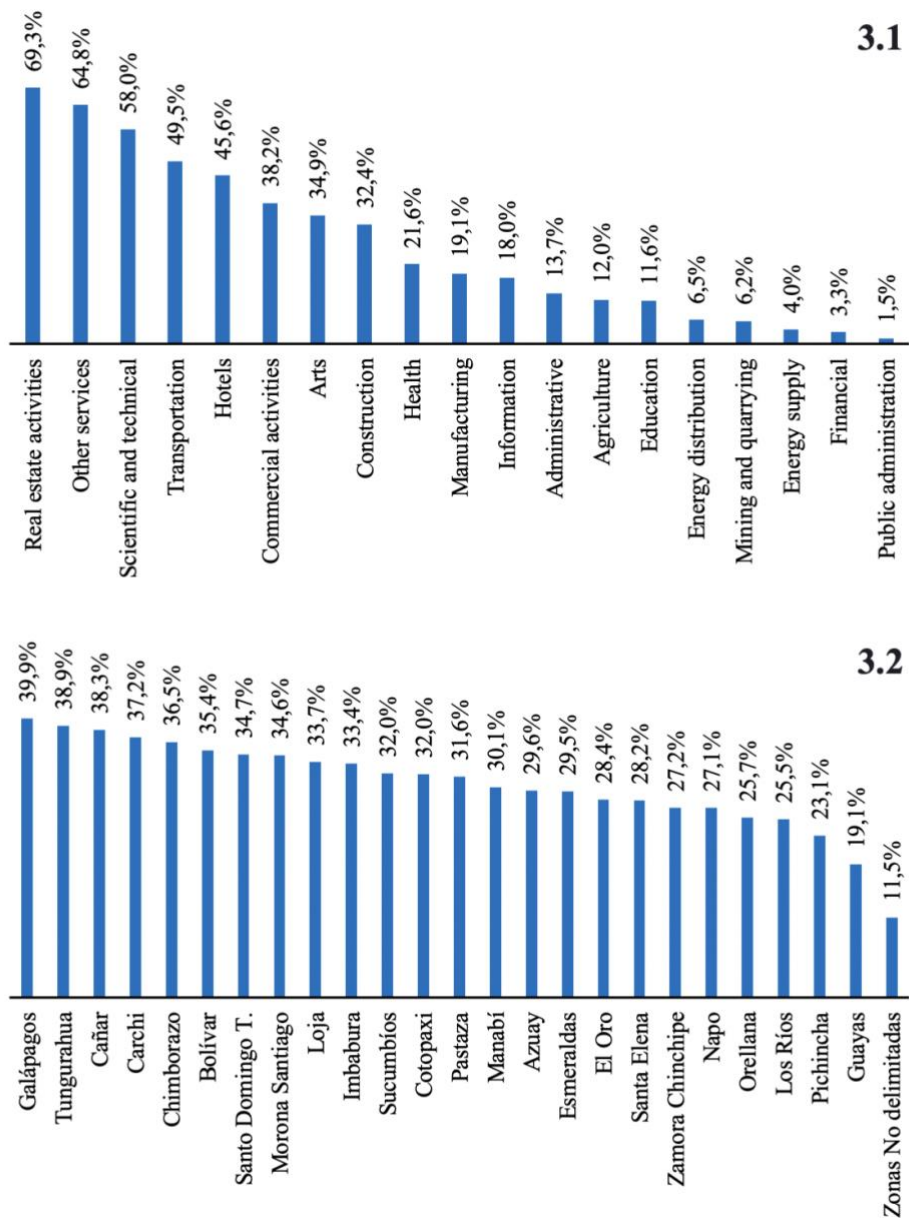


Figure 3. % of employees in Micro-enterprises by economic sectors (3.1) and the provinces (3.2)