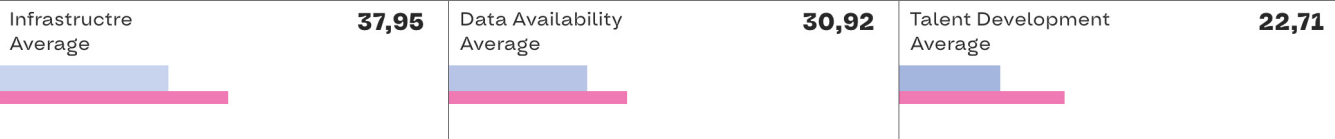
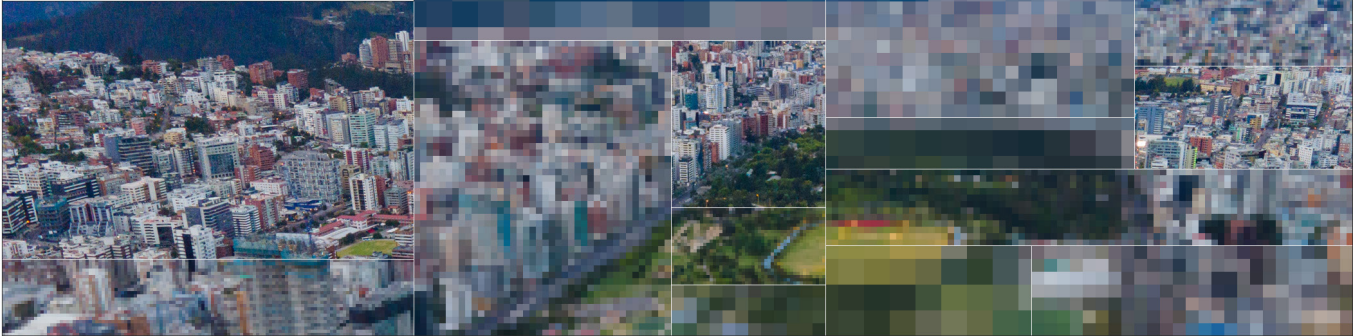


Ecuador

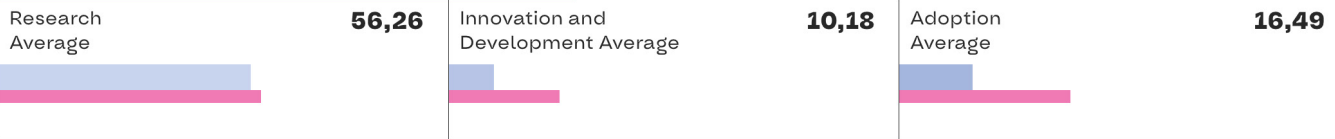
Index Score **22,17**

Ranking **10**

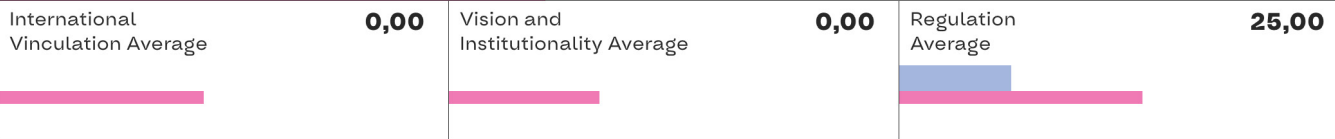
18.001.000 / Population
 5.965,14 USD / GDP per capita
 0,44 / % allocated to R&D
 0,740 / Human Development Index (HDI)



Enabling Factors Average **30,52**



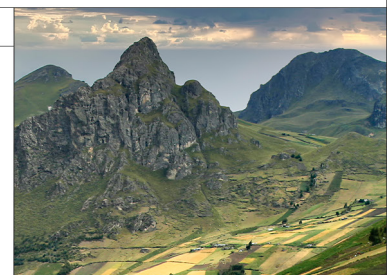
Research, Development and Adoption Average **27,64**



Governance Average **8,33**

OVERALL SITUATION

Ecuador presents challenges in several dimensions of ILIA, but also stands out for its good performance in the area of research. The considerable productivity of its academic community can be leveraged to improve in areas such as adoption, AI training, data use and impact, and innovation. In addition and above all, the experience and knowledge of the scientific community can be leveraged to strengthen areas such as governance and establish a national AI strategy. Regarding the talent drain, it is observed that this is not significant in the country. On the other hand, there is an increase in the number of those who integrate AI concepts in their publications. Spain is positioned as an important migration and collaboration power, and there is a progressive diversification in the countries in terms of migration and collaboration.

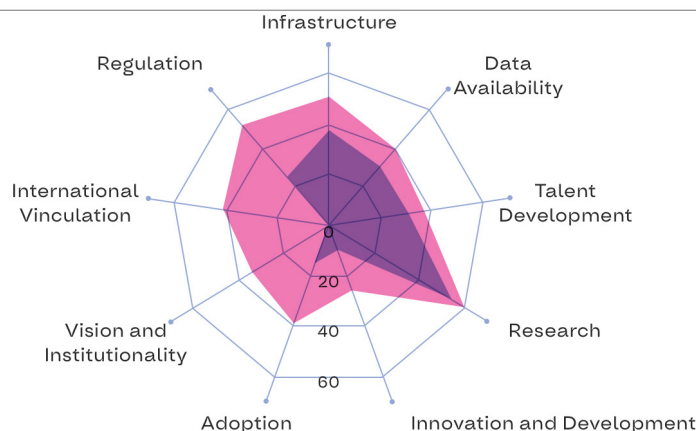


Ecuador

Index Score **22,17**

Ranking **10**

Ecuador
Latam



Graph EC1

GENERAL FINDINGS

In terms of infrastructure, Ecuador has great opportunities for development; while the percentage of the population using the Internet exceeds the Latin American average, the average download speed is below the region, and 5G technology has not yet been implemented. On the other hand, in computing, it is below the Latin American average in investment, migration, experience and potential in the cloud.

The number of data centers is also low compared to other countries in the region. In terms of devices, it is below Latin American averages, both in mobile device subscriptions and in the percentage of households that have a computer. In reviewing the Data Barometer, strengthening the availability, capabilities, policies and use and impact of available data constitute growth opportunities for the Ecuadorian country, which can also learn from the experiences of the rest of the region.

In terms of talent development, Ecuador has the implementation of ICTs in its formal curriculum, but it is necessary to strengthen it through the creation and promotion of open courses in AI. In addition, the country's vocational training has the lowest levels in the region in all sub-indicators. Therefore, it is necessary to promote undergraduate and graduate programs, as well as to seek mechanisms to develop both technological skills in the workforce, as well as disruptive skills.

In the area of research, high indicators stand out; the country exceeds the Latin American average in publications, active researchers and productivity per average author. However, it is below in AI research impact. Additionally, it faces the challenge that there is no AI research center that can bring together the important academic community around the discipline.

In the field of Development, there is an important window of opportunity, since it has a mature scientific ecosystem; however, development indicators are below the regional average in productivity and quality of open source code, number of patents and amount of incoming private investment for AI. In the same line of gaps, it is below average in government promotion of AI investment.

Governance is an area with great potential for growth in Ecuador. The country's scientific community is relatively mature in relation to Latin America. Despite this, the country does not have a national AI strategy, so it is a pending challenge to generate this strategy, along with the creation of institutions responsible for its implementation through mechanisms that allow participation and advocacy in the country.

At the international level, Ecuador is in the regional median in terms of participation in the definition of standards, and in terms of participation in international organizations and committees. In terms of regulation, the country is below the Latin American average as it only has a Data Protection Law, having deficits in the rest of the indicators.

Ecuador

Index Score **22,17**

Ranking **10**

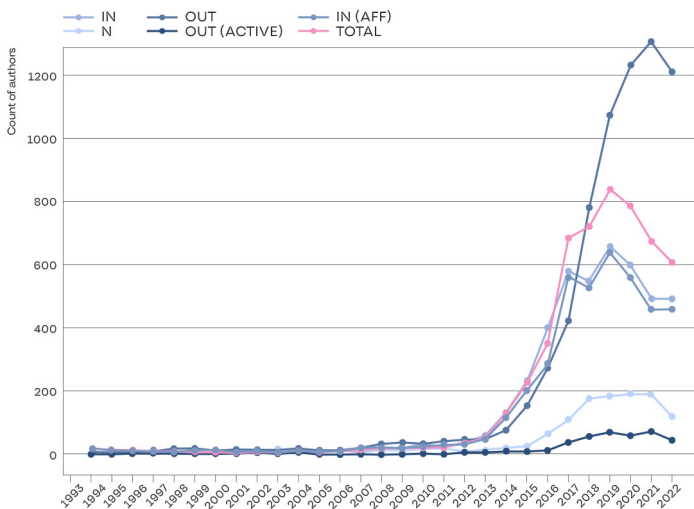
TALENT DRAIN:

The talent leakage phenomenon shows us a marginal increase higher than the regional average from 2016 to 2022, but it is lower than the rest of the analysis elements (out-active). We also note that the total number of authors was very low until 2006, when it begins to grow considerably until 2021 (total).

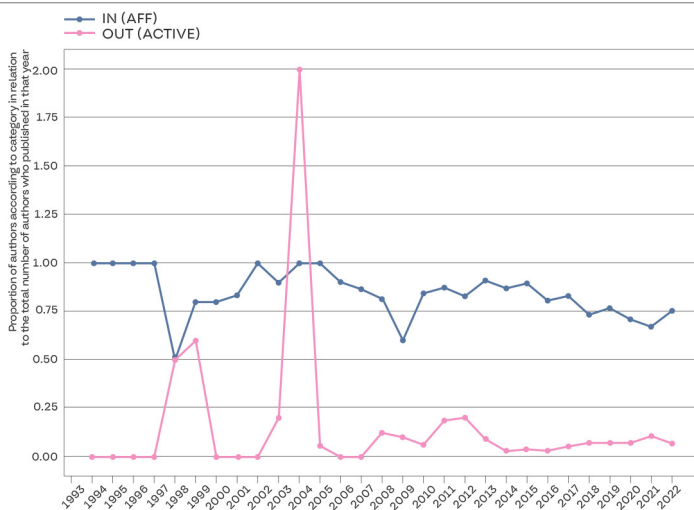
The number of authors who consistently publish in IA has progressively increased from 2014 to 2021, but by 2022 we observe a drop in this number (N). In addition, the number of those who published in other countries and began to publish in Ecuador increased progressively from 2013 to 2017 (in-aff), an increase that is also reflected in the number of those publishing for the first time in IA (In).

Since 2012, the number of authors integrating AI concepts in their publications has grown significantly (out), thus reflecting the strong trend towards transdisciplinary scientific production (see Graph EC2).

Talent migration: Ecuador / Graph EC2



Talent migration: Ecuador / Graph EC3



To analyze Graph EC3, it is important to note that prior to 2006 the number of authors in the country was very low. The high variability in the first 13 years is due to the fact that the academic community was still small, so the mobility of few authors strongly impacts the proportion of the curves. In addition, we observe that the proportion of authors who had not published in the region and who do so in the year of analysis has a slight tendency to decrease over time (in-aff).

On the other hand, we see that the proportion of talent drain is marginally higher for Ecuador than for the average of the region, it has had significant jumps, such as 2004 reaching 200% and has been increasing since 2014 over the years (out-active), but remains relatively stable at around 15% (see Graph EC3).

Ecuador

Index Score **22,17**

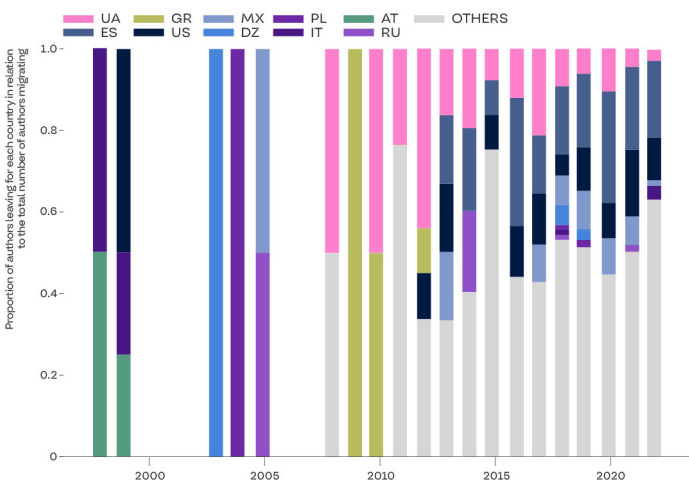
Ranking **10**

TALENT DRAIN:

Regarding the origin and destination of the authors, the importance of Spain can be appreciated and, unlike the rest of the countries in the region, a strong influence of Ukraine can be seen between 2010 and 2020, but it has been progressively losing importance. The USA and Mexico also appear as important destinations and origins, and unlike the region, we see that the entry and exit of authors to and from China is not among the top 10.

The migration patterns described for arrival are similar to those for departure, except that those who arrive from Spain to Ecuador are more than those who migrate there. This leads to the conclusion that the majority of incoming migrants come from countries to which they had previously migrated. Among the most important differences in this country, we find that the phenomenon of destination diversification is much stronger during all the years of analysis than in the average for Latin America, especially for those who leave Ecuador (see Graph EC4).

Talent migration: Where are the authors that published in Ecuador going? / Graph EC4



Talent migration: Where does the authors that publish in Ecuador come from? / Graph EC5

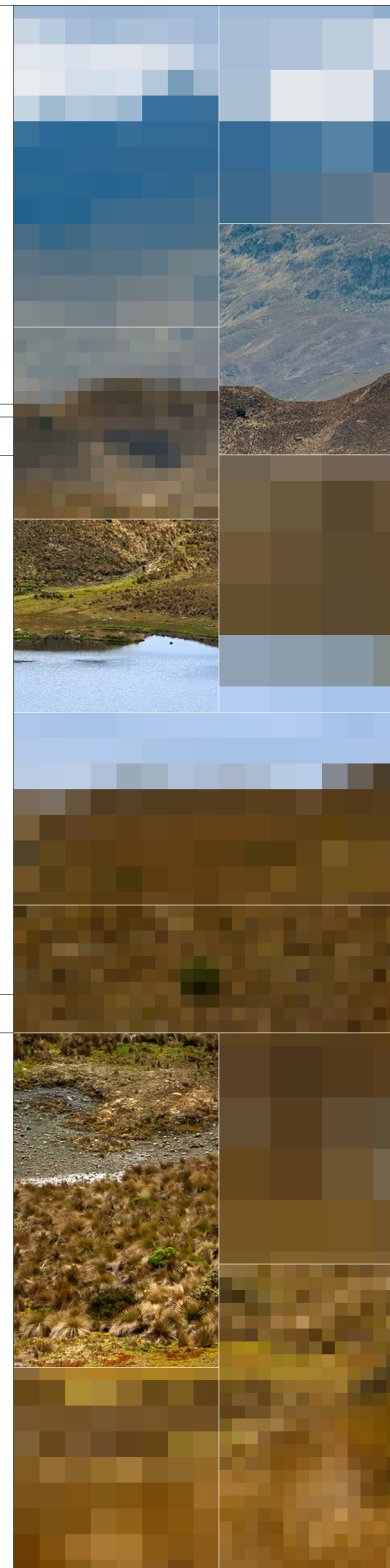
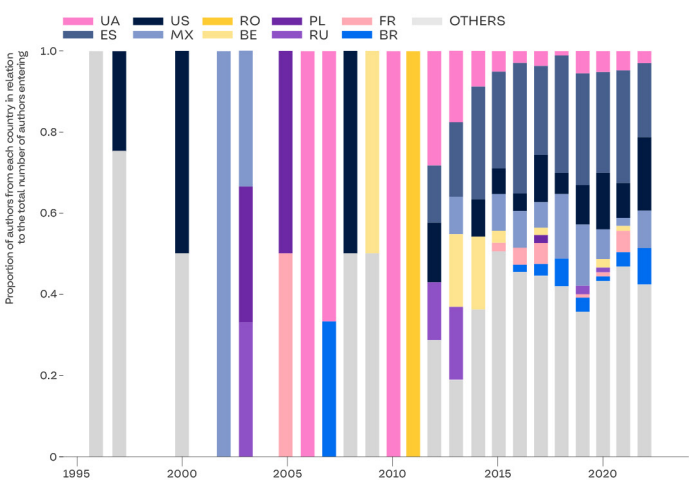


TABLE EC 1 Summary of scores and ranking in each sumdimension and indicators for Ecuador

Dimension	Subdimension	Indicators	Ecuador	LAC Average	Ranking
Enabling factors	Infrastructure	Conectivity	37,679	56,320	8
		Computing	25,917	33,725	10
		Devices	50,258	63,597	12
	Infrastructure average		37,951	51,214	10
	Data	Data barometer	30,924	39,800	10
	Data availability average		30,924	39,800	10
	Talent development	AI literacy	37,500	48,958	4
		AI professional formation	4,253	33,888	9
		Advanced human capital	26,387	28,053	4
	Talent development average		22,713	36,966	9
Enabling factors average		30,529	42,660	10	
Research, development and adoption	Research	Research	56,265	58,471	7
	Research average		56,265	58,471	7
	Innovation and development	Development	10,725	24,768	10
		Innovation	9,635	24,684	8
	Innovation and development average		10,180	24,726	10
	Adoption	Use of AI in companies	4,057	25,798	8
		Public promotion of AI	28,929	50,734	10
Adoption average		16,493	38,266	10	
Research, development and adoption average		27,646	40,488	9	
Governance	Vision and institutionality	AI Strategy	0,000	35,417	8
		Social involvement	0,000	21,875	5
		Institutionality	0,000	43,750	2
	Vision and institutionality average		0,000	33,681	8
	International vinculation average		0,000	45,833	4
	Regulation average		25,000	54,167	4
Governance average		8,333	44,560	9	
AI Index		22,170	42,615	10	