

Recent transformations of technological governance in Latin America

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When a technology emerge?

Digital
democracy

Artificial
Intelligence

FinTech

Autonomous
Vehicles

Machine
Learning

Domestic
Robotics

Quantum
Technologies

Virtual Reality

Gene Editing

Synthetic
Biology

Social
Networks

Renewable
Energies

Space Tourism

Internet of
Things

Non-medical
Implantables

Brain-
Computer
Interfaces

Augmented
Reality

Blockchain

Genetic
Testing

Big Data



Simon Bolivar



Hebe Vessuri



Dependency

Is S&T governance of American
countries prepared to regulate
Emerging technologies?



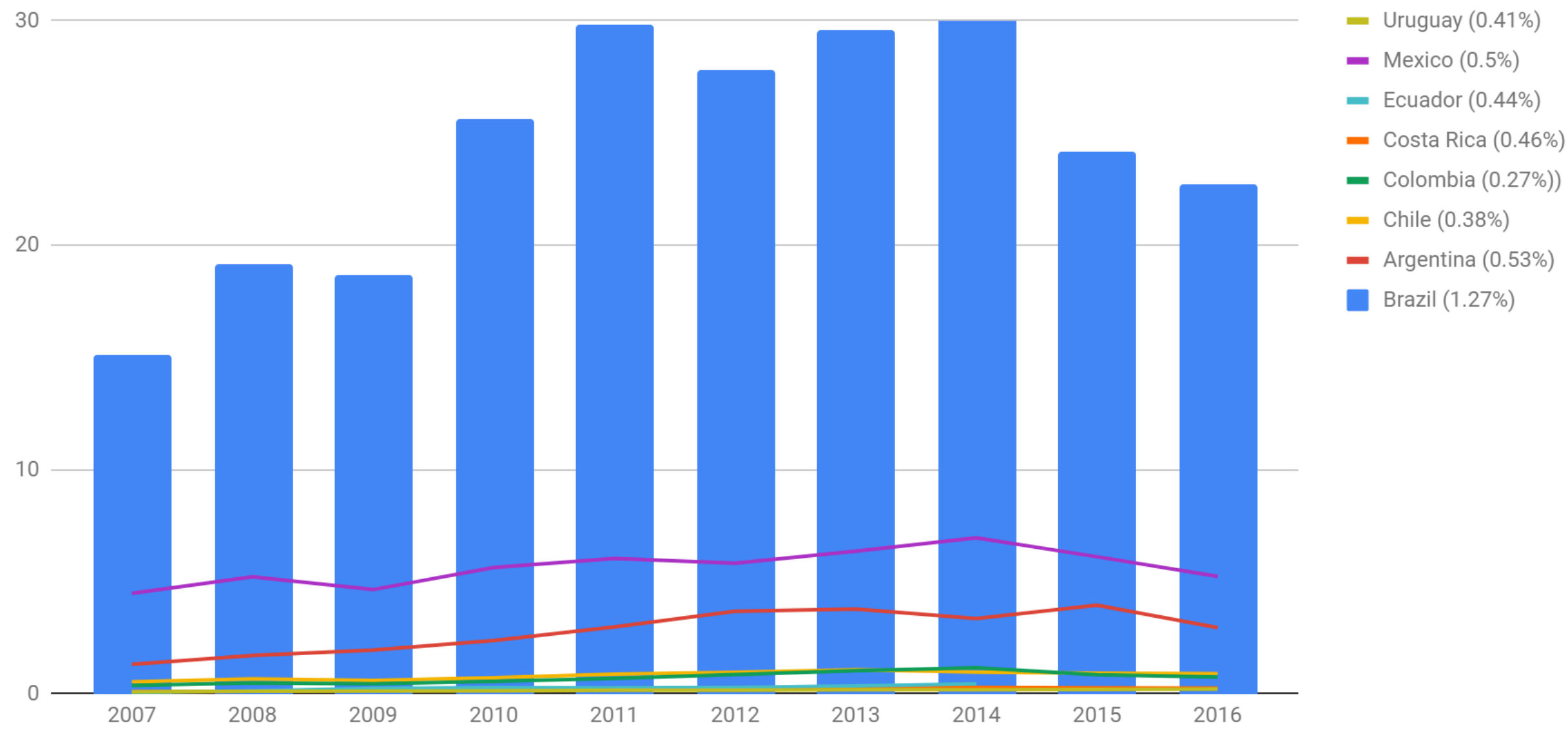
Latam Scipolicy

With 8% of Global Population, Latin America produce 5% of scientific production and 0.3% of patents (2015)

Last 10 years as process of transformation in S&T institutions and programs do not prepare countries in the region to face regulation of emerging technologies

Stability of organizations is not related with success or failure of programs, instead relevance on government agenda

Annual Investment S&T M\$US by country (2007-2016*)



	Institutional organization	Regulations/Legislation
Argentina	SecCTI (2017, ex-Min – 2007). CONACYT (1958)	Law of Science & Tech (2001)
Brazil	MCTIC (1984), CNPq and Finep.	Several sectorial laws
Chile	Minister (2018), national innovation council (2005). CONICYT (1967)	Ministry Law (2018)
Colombia	COLCIENCIAS (1968)	Law of Science, Tech and Innovation (2009)
Costa Rica	Ministry of Science, Technology and Telecommunications (1990)	Regulation of Science System (1990)
Ecuador	Ministry of Education, Knowledge and Culture (2015)	Law of Science, Technology, Innovation and Indigenous Knowledge (2015) Plan Ingenio (2016)
Mexico	Council (2017 - advisory) CONICYT (1960)	Law of Science (2002)
Uruguay	Ministry of Education and Culture (~1884)	National Plan of Science and Tech (2019)

	Scientific Production (publication per million inhabitants in 2014)	Patents Application (2009-2013)	Doctors in Country (FTE by 1000 labour force,2012)
Argentina	189	71	3.02
Brazil	184	153	1.48
Chile	350	187	0.32
Colombia	61	33	
Costa Rica	96	44	2.11
Ecuador	32	6	0.41
Mexico	90	75	0.88
Uruguay	241	92	1.08



- Support and investment in Renewable Energy (Costa Rica, Brazil, Uruguay and Chile)
- Space Autonomy (Brazil and Argentina, 2013-14)
- Cybersecurity (2016-19, Brazil, Argentina, Uruguay and Chile)
- Biotechnology investment and increased number of doctoral researchers (Brazil, Argentina, Mexico and Colombia with focus in agriculture and Biodiversity)
- International Start-up programs (Chile, 2010, Mexico, 2013 and Colombia, 2015)

Emerging
agendas
(2008-2018)

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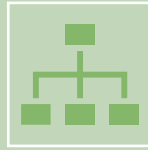
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2008-2018 LatamSciPol



Low degree of institutional articulation.
Participation of scientist in politics and citizens
in research has a low impact.



Lack of structures of evaluation and program
continuity. Programs do not observe them self
as leaders in new areas of technology.



Increasing number of doctors and
professionals, with networks in US and
Western Europe



Slowly (and bumping) relevance in political
conversations

Recommendations



Interregional articulation in scientific and technological agendas. Block Effect



Assessments of agendas with focus in ethical and social evaluation of expected impacts at national scale (incorporation of competence in executive bodies)



Incorporation of legislators in S&T conversations, in particular on early adopted tech on industry, civil society and government



Increasing of attention of co-dependent relations with nations and corporations producing and exporting emerging technologies

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