

Social Innovation and Technology in Latin America

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Summary

The World finds itself *ad portas* of a new era. The massive diffusion of digital technologies and complex systems combining hardware, sensors, data storage, microprocessors, and software are changing the nature of products, altering value chains, transforming political, economic, and social structures at a global scale, more quickly than in other periods of history. These changes have been causing a breakdown within the actual life model, leading to the current digital era.

According to a report by the Economic Commission for Latin America and the Caribbean CEPAL, it is expected that for 2020, the broadband speed will be doubled, the number of devices connected to the IP network will be three times bigger than the world's population, and the total number of smart phones will represent about the 50 percent of global connections and devices.¹

This context presents new scenarios: Robots and automatized learning and the substitution of job

positions with repetitive tasks; new ways of production requiring digital skills, and the development of specialists to create and manage new production systems, on one side. On the other side, new scenarios of competition for companies with the imperative necessity to increase productivity through innovation.

The immediate circulation of information has led to the emergence of social media that connects people and communities that could not otherwise connect, and with that, they produce a flow of information that is becoming a fertile ground for social changes.

In the words of Sheryl Sandberg, COO de Facebook:
"Technology puts a name and a face -- a true identity - - to those that were invisible before and gives sound to voices that otherwise could not be heard." ²

This situation has caused technology hubs, incubators, and laboratories working all around the world to enable knowledge and adaptation to situations that should be considered opportunities to think *out of the box*, outside of comfort zones where the same solutions are being used to solve social and economic problems that require different solutions.

It is precisely at this point that the mission of the *Social Innovations Journal* acquires special importance, by giving visibility to these new ideas that will resonate and become examples that will generate new ideas

that will solve social problems on a global scale. Collaboration is key, and technology causing this change, will also be the instrument to face these challenges and enable all of us to adapt to this new era.

In this edition, we will focus on the articulation of Technology and Social Innovations in Latin America.

TEPSIE, the acronym of Theoric, Empiric, and from Policies Foundations for the Social Innovation Construction in Europe, provides a definition of Digital Technology in social innovation as the *“use of Information, Communication, and Technology (ICT) such as online network and other digital tools to support and/or allow the social innovation.”*³

According to this definition, social innovation is being improved by the use of ICT. This does not mean that in all the social innovations the final user and the beneficiaries are going to use digital tools to meet their needs and solve their problems, but to perceive technology as a tool that, used in a certain way by one of the actors or in a particular moment of the development process of the social innovation, will support, improve, and/or allow the searched social change.

This means that digital technology:

- is an important support for existing social

- innovations because it allows them to have better results in terms of performance and efficiency;
- allows the emergence of new types of social innovation producing new impacts and opportunities through having access to the required information to develop and facilitate new forms of collaboration seen as a dynamism in communications between the stakeholders; and
 - can modify in a significant manner the structures and type of governance in a society and set new social and business models that were not possible before, since it fosters new different production process, value chains and organization models.

Thus, it can be said that digital technology is producing a change of culture that modifies the relationships between people and changes the approach of problems and their solutions.

Understanding the cultural context, is then fundamental to designing social innovation projects and to adapting them to the present reality.

The challenge lies in answering the question of how science, technology, and innovation can contribute to development and how to achieve participation in global growth from the perspective of sustainability and social, environmental, and economical inclusion.

Latin American Summary

Latin America is a continent of contrasts. According to a report made by the CEPAL during the Open Forum of Latin American and the Caribbean Sciences held on September 2016⁴ it is a region that on one side, is focused on the production and exportation of products from natural resources with low added value, and, on the other side, there continues to be a low level of investment in science and technology. In addition, while industrialized countries have preeminence of private financing for research and development issues, in Latin America, this financing is essentially from public institutions. Companies in the region are deficient in supporting research and development and most of them prefer to import technologies and adapt them to their needs.

The New Objectives of Sustainable Development and the Agenda 2030 for Sustainable Development presents additional challenges for the region given the necessity to reach a certain level of economic growth, social inclusion, and environmental sustainability.

In fact, according with the CEPAL's report, the indicators of efforts in innovation and access to technology are not positive:

- The capacity for the region to absorb the new technological paradigms and participate on their creation is still weak.
- The implementation of policies and agendas on

research are timid.

- There is a lack of articulation of capacities and opportunities in science, technology, and innovation to optimize a sustainable development.
- There is an important need for public policies that will generate inclusive and sustainable development processes based on science, technology, and innovation.
- Micro and small companies represent the biggest percentage of participation in the region's production and nonetheless have several problems in accessing appropriate credit, they do not have capacity to support innovation, and absorption of new knowledge due to low contact with other companies. There are a lot of start-up projects that, for different reasons, cannot succeed and scale for lack of financing and dependency on ever demanding philanthropic sources.

According to recent predictions, it is expected that, in the developed countries, the technological change will produce more than 5.1 million losses of positions between 2015-2020. This scenario is tough for countries experiencing bigger population growth without the needed skills for the new challenges, as well as inappropriate and lacking institutional framework to respond to these changes.

The global technological dynamics show that competitiveness and growth of countries will depend increasingly on their capacity to integrate the global digital ecosystem. This ecosystem will push them to improve their infrastructure, the human capital, and the entrepreneurial environment, define the world's standards, regulate the data flow, protect intellectual property rights, and defend the safety and privacy of users.

In a study of about 100 initiatives of digital social innovations that are transforming Latin America conducted by the ESADE (Upper School of Administration and Management of Enterprises), University Ramon Llul and the Institute of Social Innovation, consider the subject of digital social innovation regionally is starting to have an important impact especially in the sectors of education, health, and financial inclusion, allowing, in general, measurement of social impact; a better understanding of people's behaviors through tools like big data analysis; connection between actors that usually would not be connected; and the scalability and replicability of social innovations. The study also shows that some countries in the region are perceived as having more advances, such as Chili who is having a more consolidated innovative and entrepreneurial ecosystem, Brazil, Mexico, and Colombia with dynamic ecosystems and intermediaries that are supporting

social innovations, and Argentina with a promising future thanks to the high number of B certified companies.

Final Considerations

In general, it can be affirmed that technology is pushing the region to adopt, own, and implement social impact as a necessary tool to support and improve innovation projects promoting sustainable social impact, not only to position itself in the international economy but, also, to face new problems arising in the present digital world.

It is essential for the region to analyze opportunities and challenges arising because of the digital economy. It requires the development of new skills to work with technology to solve problems rather than seeing it as a threat that would replace humans.

To close the productivity gap between Latin America's countries and developed countries, it is necessary to incorporate technology in the productive process and articulate it with the development objectives of the countries. Inasmuch as there has been progress in this matter, the only way to accomplish this is by creating more fair and inclusive societies. For that, two essential aspects should be considered:

On one hand, a change of perception is needed. A

cultural change through which the innovative way of thinking is promoted in order to encourage people to think “out of the box,” look for new solutions and new ways of approaching problems, and to use technology as a tool at service of their creativity. In other words, being aware of the necessity to promote research, and the development of new skills, required not only to adapt technologies coming from abroad to the regional context, but specially to create it locally.

On the other hand, collaboration. It is clear that the articulation of private sector, public sector, civil society, and academia is essential to support, develop, and scale social innovations in a framework of relevant public policies that are consistent with the population’s needs.

Finally, I would like to highlight a proposal made by the CEPAL concerning the necessity to enhance actions of regional cooperation. The region faces similar challenges and problems and a joint effort to boost a digital economy only represents benefits for all.

In this sense, I would like to introduce the subjects developed in this edition:

[INTERPRETA Foundation: The Use of Technology in Humanitarian Work](#)

Bastián Díaz

The Foundation was born in 2016 in Santiago, Chili, as an answer to problems of the migrant communities in Chili, a growing issue in recent years. Moving away from assisting solutions such as delivering breakfasts or giving Spanish courses to Haitians, the Foundation prefers to position itself as an example of innovation by using tools of the corporate world and technology to solve problems related to immigration issues.

[Local Innovation Ecosystems to Strengthen Agroecology in Colombia: The Preliminary Case of LabCampesino of Tierra Libre's Organization](#)

Juan David Reina and Julián Ortiz

The use of digital technologies based on free hardware to contribute to the promotion of agroecology is in itself an innovative idea. However, it is the process of social owning of science, technology, and innovation in the rural sector and specially from the rural population, which creates disruptive conditions facing the traditional practices of technological transfer. In this sense, the article presents the progress and opportunities that are creating the Tierra Libre Project and, in particular, its initiative of LabCampesino that aims to strengthen a social innovation's ecosystem and to promote agroecological practices in the rural population of the province of Sumapaz, Colombia.

[The Social Innovations Scientific Park](#)

Paula Estefanía Castaño

The Minuto de Dios Organization (MDO), created by Father Rafael García-Herreros in the second half of the 20th century, has focused its efforts on service to society as the driving force of each of its entities; these, always seeking to respond to social problems in Colombia in various aspects such as health, housing, education, and others. And it is thanks to this approach, that in 2012 the work of the Social Innovation Science Park (SISP) begins as a commitment to social innovation responding to social needs. In this, we will take a closer look at how the SISP came about, what it is, how it works, and its impact.

[MPZero: Sustainable, Affordable, and Clean Heating Available for Everyone](#)

Ricardo Soto

Every winter, the air pollution caused by the combustion of biomass for residential heating is one of the biggest environmental problems suffered by the cities of South-Central Chile. Because the use of wood-burning stoves is the most affordable heating method, it remains today, despite its negative environmental implications, the most used tool by the population of Chile, despite causing serious health problems in the community, especially for children and

the elderly. MPzero is a device for reducing emissions of fine particulate material, developed in Chile, which captures up to 97 percent of the emissions produced by this heating equipment, helping to keep the air clean and heating costs low for families who do not have access to heating methods that produce less pollutions.

[Leadership Profile: Martha Leticia Silva](#)

María Alejandra Navas

The leader of tomorrow is humble and authentic, curious and sensitive, flexible to learn new things and adapt easily to changes. It is someone who does not give up and versatile enough to consider differences as opportunities for growth,

I met Martha Leticia Silva Flores during a social innovation event organized by the CISAI, Center of High Impact Social Innovation, in Jalisco, Mexico last June. She is its director and the impression that she made when we met, and what I was able to learn about her in just a few days' time, convinced me to write about her as a leader of tomorrow.

[Connecting Points: Intelligence on Field to Solve Social Problems](#)

Iván Yza

Facing the search for the democratization of the media and the need to access new technological tools to allow for the solution of problems related to transparency and accountability, most of which we know little to nothing about their functioning or how to put them in operation, Virk came into existence in 2014. Virk had a clear objective: to create tools that will allow organizations to innovate in issues like the systematization and documentation of information in low-cost and user-friendly, simple ways. This enabled Virk to become a channel for innovations and avoid restrictions that most users have facing new technologies, and to develop the first tools for reports and documentations in Mexico and Latin America.

¹ CEPAL-NACIONES UNIDAS. Ciencia, Tecnología e Innovación en la Economía Digital. Septiembre 2016.

² Patricia Morizio. Huffington Post. Febrero 2013.

³ Jeremy Millard, Gwendolyn Carpenter. Digital Technology in Social Innovation.

⁴ CEPAL SEPT 2016

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