


The role of trust as a new driver for global cooperation on technology: the case of Latin America with Spain and Korea

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Theme

Trust is an element of necessity but also a strategic tool to guarantee global cooperation on technology driven by equal partnerships, exit strategies and confidence among middle-power countries that lead in certain technology areas, and medium and low-income countries in Latin America.

Summary

Global cooperation on technology is a growing issue that touches on geopolitics, economics, rights and citizenship. While the focus has largely been on great-power rivalry and on material technological capabilities, there is a need and opportunity to seek other realms of cooperation among other sets of countries. This is notably important for middle-power countries that are gaining terrain in certain technology areas, as well as for developing countries that have experienced an accelerated digital transformation and might find various countries to partner with. This is the case of Spain and Korea as middle powers, and Latin America as a patchwork of socio-political realities as well as medium- and low-income countries.

However, cooperation needs to be governed by trust. Trust has two definitions when it comes to global technology governance. First, digital trust refers to the level of citizens' confidence in the design, deployment and use of digital services ('trust in the tool'). Secondly, from a geopolitical perspective, in the model of international cooperation trust refers to the likelihood of increasing successful cooperation agreements in the field of digital transformation between countries (confidence-building, and the alignment of values and principles on the way to framing partnerships).

Evidence shows that both Korea and Spain –and the EU– are increasingly promoting mandates and projects with Latin America in the technology realm. However, they still lack a coherent, strategic mandate. So far, projects have been *ad hoc*, targeted in scope, time and audience. There is a need to move from a project-based approach to a truly high-level mandate. This is a necessity but also a window of opportunity for all sides at a time when supply chains are being disrupted. Trust –at the citizen and diplomatic level– may provide confidence and stability in the long run and the channelling of Spanish, Korean and Latin American needs and demands at the international level through the lens of equal partnerships, the fight against inequalities and the guaranteeing of

democratic principles, adapted to the consequences of the technological era in geopolitics and at the citizen level.

This paper proposes three main policy recommendations. First, to gather and monitor data on technology cooperation with Latin America's disaggregated figures, with their own boxes, and not only as part of long-existing boxes such as development cooperation or trade. Secondly, to include trust as a strategic element in foreign policy mandates on technology cooperation. It is important to include this idea of trust at its two-fold level (digital trust, citizens; and diplomatic, geopolitical trust). Third, Spain should leverage its Presidency of the Council of the EU in 2023 to include the Latin American-technology nexus in its mandate, and the EU's Digital Partnership Agreements with Asian countries should take into consideration the opportunity of working with Korea.

Analysis

Introduction

Trust has been a barely explored, if not uncharted, element as a driver of global cooperation on technology. Beyond the narrative and reality of great-power rivalry and the analysis on purely material capabilities to gain leadership, an outlook on the role of other diplomatic, softer but equally important assets –trust– and in other regions is much needed. This is the case of Latin America, a patchwork of complex socio-political realities characterised by harsh economic conditions and political polarisation that has experienced an accelerated digital transformation as a result of the restrictions imposed on mobility during the global COVID-19 pandemic.

The rapid entry of certain technologies into people's everyday lives in the region and the limited situational awareness on the economic, political and social consequences of technologies at the governmental level represent a wake-up call that make trust a vertebral axis in the way Latin America should enhance further cooperation on technology with other countries, in order not to increase current inequality figures both at the citizen and geopolitical levels.

Trust may be seen at a two-fold level: as digital trust referring to the level of citizens' confidence in digital services (tools), and as trust in the model of international cooperation that increases the likelihood of successful cooperation agreements in the field of digital transformation between countries. This second definition of trust touches on confidence-building, alignment of values and principles in framing partnerships, and on values-based technologies that impinge on the respect, promotion and guarantee of human rights while designing, using or deploying technologies.

In this realm, international cooperation on technology is a rising topic of interest for middle powers as well, which are not in the great-power rivalry game. This is the case of Spain and Korea, which have prominent numbers in some technology areas, such as cyber-maturity or 5G deployment, and only follow the US and China in certain rankings for some issues. Also, their approach to cooperating with third countries has increased in recent years, especially in middle and low-income countries, not only from the

perspective of government-to-government (G2G) e-governance activities, but notably in business relations (B2G, B2B).

However, the challenge is to make sure cooperation between Spain and Korea with Latin America is foreseen not only as a model of cooperation based on economic opportunities and complementarity of capabilities (as usual in recent years worldwide), but also as a tool whose mandate, principles and implementation truly address digital and developmental goals on a basis of equal partnerships, with exit strategies, and on a level playing field. This approach is paramount to guaranteeing a sustained, sustainable and stable international order.

Latin America as a diverse socio-economic scenario

Current socioeconomic conditions in Latin America are marked by low economic growth, rising inflation and very high income inequality. According to the IMF, real GDP growth in Latin America in 2021 was between 5.9% and 6.3%. The IMF expects a lower regional GDP growth rate for 2022 to be set at around 3.0%. Fluctuating and currently declining growth rates in the region have also taken a toll on current social conditions, according to UNDP. Despite declining regional income inequality in the 2000s, measured by the Gini Index from 52.8 points in 2002 to 47.0 points in 2012, inequality remains high. A level of 46.3 Gini points was reported in 2018, a figure given before the 2020 global COVID-19 pandemic, which has in turn entailed a surge in inequality in multiple layers over the past two years.

Moreover, global and regional growth prospects state that high inflation will remain in 2022. According to the United Nations, annual global inflation is set to reach 6.7% this year, with developing countries in Asia and Latin America suffering its effects. Also, the IMF has concluded that inflation in Latin America for 2022 and onwards will be the highest rate of the past 15 years and will particularly exacerbate and hit the poorest populations the hardest. Finally, according to UNDP there are a number of structural factors that help explain current levels of high income inequality and low economic growth rates, mainly linked to a high concentration of economic and political power, worrying dynamics of criminal and social violence, as well as poorly functional social protection policies and measures. In these three areas, technology is gaining terrain (as part of the economic and political landscape, as a tool used by criminals, and as an element that creates both opportunities and also inequalities for social public policies).

Digital transformation trends in Latin America

Despite the harsh economic context, digital transformation in Latin America has accelerated as a result of social and economic adjustments imposed by mobility and physical restrictions to confront the global COVID-19 pandemic. In this respect, the entrepreneurial ecosystem has played a critical role in the process. Data from LAVCA and Atlantico show that venture capital investment in tech start-ups in the region has increased since 2018 from US\$5 billion to a current estimate of around US\$15 billion and US\$18 billion by the end of 2021.

The high amount of investment in the past three years resulted in the duplication year by year of companies valued at more than US\$1 billion. The main sectors these companies come from are telework, telemedicine, e-commerce, fintech and insurance, delivery services, circular economy solutions and govtech. Nonetheless, current global inflation trends by mid-2022 have already negatively impacted the investment trend in Latin America. According to the financial intelligence firm *CBInsights*, funding for new business in Latin America dropped 60% between 2Q21 and 1Q22, and the number of new unicorns in the region has reached its lowest figure in five consecutive quarters. Inflation is not the only major challenge that the tech venture ecosystem in Latin America is currently facing. According to *El País*, sudden and high growth rates of tech-based start-ups has already shown that the lack of regulation and adequate governance structures amplify structural inequalities. The expectation of reduced investment flows into the digital entrepreneurial ecosystem in Latin America and the structural risks associated might hinder new technology developments in the region.

Despite the increased funding for tech start-ups, relevant digital-gap related challenges remain in the region. According to the *Development Bank of Latin America*, in 2018 the Digital Ecosystem Development Index in Latin America was at 49.92 points (on a 0 to 100 scale), below North America (80.85 points) but above Africa (35.05 points) and very close to Asia Pacific (49.16 points). This is explained in part by some key structural limitations such as income segmented access and differentiated quality of Internet connectivity, insufficient Internet speed, gaps in digital skills and a low digitalisation of productive processes.

Some of the most relevant challenges and limitations for regional digital transformation efforts start with the fact that, even though 67% of the region's population has Internet access, only 14% of users connect through broadband at home. This reveals a negative dynamic of mobile connectivity that affects quality of connectivity to perform educational or work-related activities. According to the *International Labour Organisation*, although the proportion of teleworkers surged from less than 3% in 2019 to more than 20% in 2021, only 21.3% of workers in the region perform tasks that can be done remotely. Another major issue the region faces is the lack of access to adequate digital skills for a fast-changing and unequal environment. According to the *OECD*, around 25% of jobs in Latin America are at high risk of automation with varying proportions from one country to another.

Despite the current socioeconomic context in Latin America, digital transformation has accelerated at a fast pace with a significant contribution from venture capital investment and tech-based start-ups with positive demographics of a young, yet ageing, region. For this digital transformation to be inclusive and create a positive economic impact, it must address key digital infrastructure gaps to promote a more sustainable and inclusive use of the Internet based on a more digitally savvy population.

Political environment

Latin America is a region marked by a high degree of political heterogeneity with varying levels of political risk for the advancement of cooperation efforts in the field of digital transformation. The period between 2021 and 2024 will be marked by an intense

electoral period, with 17 presidential elections and a number of legislative, constitutional, municipal and regional elections. The current political environment in the region is a result of a number of broader trends or common phenomena experienced over the past three decades, with many nuances and exceptions, but with a marked change in dominant ideological preferences.

Latin America has also been part of a global retreat in trade openness since World War II. According to the Peterson Institute for International Economics, the concept of 'de-globalisation' or 'slow-balisation' is not entirely new, as world economic integration has been in decline since the 2008-10 financial crisis, yet it has increased more recently as a result of the COVID-19 pandemic and adopted by inward-looking governments. Nowadays, policymakers and business leaders have started to question global supply chains and economic interdependence, providing new grounds for protectionism and domestic sourcing. Dynamics such as delocalisation, telework or social distancing have already affected traditional industries such as food, clothing, travel and transport, while benefiting industries like e-commerce, deliveries and logistics, telehealth, distance learning and others. All of these global and regional trends combined with domestic politics in Latin American countries require a case-by-case approach when assessing particular opportunities for international cooperation towards digital transformation. This is particularly relevant for Latin America, which has opportunities for collaborating with middle powers with prominent numbers in certain technologies and sectors, on an equal basis.

Trust as catalyser for effective cooperation in digital transformation

Despite the clear benefits of the use of digital technologies for everyday life and socioeconomic development in the era of the digital economy, technology innovations have also been increasingly questioned for their uneven impact on the economy and society. According to MIT, former structures of oppression, extraction, exclusion and exploitation remain in place through new means. Also, the IMF assessed already in 2007 that technology widened the rich-poor gap in Latin America, and in 2021 the same organisation called for economic measures to address this strong digital divide, especially in start-up investing, which is one of the highest-risk investments to be made, or further and clearer regulation on how to cooperate internationally. This economic outlook also undoubtedly has social effects on inequality. Data-based technologies have an inherent risk of replicating structural bias and inequalities at scale. In this respect, some business models of the Fourth Industrial Revolution rely on massive amounts of data from users' behaviour to create products and services based on personalisation, prediction, recommendation and automated decision-making. These products increase their value as adoption increases, a model that tends to favour monopolistic practices, which in turn have proved to increase the vulnerabilities of free and democratic societies.

The combination of high socioeconomic inequality and political polarisation in Latin America with the inherent risks attached to new digital technologies add to the complexities that need to be considered in any model of triangular cooperation, in terms of opportunities and challenges. In the midst of this turmoil, the fundamental catalyser of potentially successful outcomes in cooperation for regional digital transformation is trust. Trust in the digital or Digital Trust, and trust in the model of international cooperation on

a basis of equal partnerships, which explains the potential suitability of ties between Latin America and two middle powers such as Spain and Korea.

Digital Trust is a concept used by many technology corporations that refer to the level of confidence that clients and users have in digital services and products, characterised by being reliable, transparent, secure, accountable and maximising benefits for all stakeholders. This refers to **robust technology** that protects the users and delivers simple, yet highly valuable outcomes. Trust in the model of international cooperation is also a major element that needs to be considered to increase the probability of successful cooperation agreements in the field of digital transformation. In particular, fields where the government and international stakeholders can move the needle should consider trust as the most relevant factor to guarantee successful outcomes. Trust at the international level refers to making sure that confidence-building, sustained dialogue on a level playing field, and stable traditional international mechanisms of resolution vis-à-vis divergences may be guaranteed in the long run.

However, this two-fold trust cannot be driven across all Latin American countries in a similar way. To give an example, Latin American countries have **different levels of cyber-maturity**. The Southern Cone subregion is the most cyber-mature, as it has addressed a comprehensive, whole-of-system approach to cyber capacity building, such as Uruguay, which is the most prominent case. Andean States are still at the 'training' stage (ie, moving forward in their cyber-maturity, but with different intensities and scope of their cyber-maturity work depending on the topic: digital skills, legislation, organisational structure, cooperation with third actors, etc). Colombia stands out due to its solid policy framework on cybersecurity and the strengthening of a cyber-aware public sector. Central America –with Belize, El Salvador, Honduras, Nicaragua and Panama, among others– is still at the initial stage of cyber capacity building and needs to foster its technical standards.

Technological deployment must also guarantee the protection of the rights of the citizens, provide measures for compensation or relocation for those that result unintendedly affected, and prove as accountable and transparent as possible. Governments should perceive that external stakeholders share as equally as possible the benefits of a cooperation model that generates economic profits in line with democratic values and norms, as well as the promotion of and respect for guaranteeing human rights while designing, using and deploying technologies, making sure recipients have true ownership over these technologies and their social impact. This mindset would allow relevant stakeholders to better navigate the choppy waters of rapid technological disruption, and economic and political uncertainty.

The role of middle powers in promoting digital trust with third countries

When it comes to talking about global cooperation on technology, the first idea that comes to mind is China, the US and the EU as big players. However, there is not much debate on the role of middle powers to promote a new approach to global technology governance based on and guided by trust, both at the citizen and geopolitical levels. As Amine Bennis from the European Bank for Reconstruction and Development (EBRD)

suggests, 'thematic diplomacy' is an effective tool for middle powers to promote shared interests with smaller states geopolitically speaking.

Two middle powers are particularly relevant for their growing leadership in several technology issues. This is the case of Spain and Korea, countries whose level of cyber-maturity is soaring, both also ranking as the fourth most cyber-mature countries worldwide, only behind the US, the UK, Saudi Arabia and Estonia. In other technologies, Korea ranks second and Spain fourth in being the countries with the most extensive 5G deployment globally, only competing with China and the US.

Spanish and Korean approaches to digital cooperation with Latin America

Spain's areas of cooperation with Latin America in the digital realm are usually managed at a two-fold level: either by means of domestic channels or through EU initiatives (more thematic than regional with Latin America). Korea's approach to Latin America is mainly driven by its own national institutions.

In the case of Spain, ties with Latin America occur in several topics. In economic cooperation, ICEX (the Network for Spanish Economic and Trade Offices Abroad) is in charge of exports to and investments in third countries, and the promotion of Spanish services abroad. Offices are nationally located, which means cooperation with Latin American countries is carried out on a bilateral basis. While there are no figures on the specific amount of Spanish-Latin American technology cooperation, this paper has gathered scattered data into coherent numbers. Specifically, the promotion of certain Spanish technology-related services in trade shows are mainly targeting European and Asian countries, and limitedly address Latin America. Upcoming trade forums in Latin America –according to publicly available data– will occur in some cases, such as technologies for agriculture in Havana (Cuba) or how to sell on online marketplaces in Brazil. However, ICEX has a Latin American Desk Unit to attract Latin American and Caribbean investments into Spain and another Tech Funding Unit which aims to increase investment flows into Spanish start-ups.

According to the Global Latin America 2021 report, 9.8% of Foreign Direct Investment received by Spain comes from Latin American countries. It is expected that Latin American-Spanish cooperation in technology will increase due to the rapid explosion of technology companies that Latin America has experienced in recent years and their willingness to access the European market. To give some figures, in 2021, 27% of Latin American investments in Spain corresponded to software and IT, and 10% came from communications services. This means that economic cooperation between Spain and Latin America is growing, although there has been a lack of publicly available data in previous years.

However, there are realms where Spain could cooperate with Latin America in technology, other than the economic outlook. These are being developed but, in comparison, to a lesser extent. There are two main lines of work at Spain's Ministry of Foreign Affairs (MFA). First, Spain has several Offices on Culture and Science in Embassies worldwide, but its mandate does not include emerging technologies. Also, the single office based in Latin America is Mexico. Secondly, Spain's MFA published a

Report for a Science, Technology and Innovation Diplomacy. However, there is only one reference to Latin America in the document: this diplomacy framework will 'fall back on the Spanish Centre for Industrial Technological Development (CDTI) to establish consensus-based initiatives with other EU Member States in geostrategic, priority areas, such as the Maghreb and Latin America'. However, the Alliance that is putting into action specific initiatives is mainly focused on EU countries. On the other hand, as for development cooperation projects, the Masterplan V 2018-2021 acknowledges that ICTs are a horizontal and cross-cutting enabler for all Sustainable Development Goals (SDGs), with a focus on smart territories, education, women's entrepreneurship and strengthening industry.

Spain also participates in EU-wide initiatives abroad. The EU-CELAC Strategic Roadmap 2021-2023 foresees digital transformation as a sub-pillar under the 'Global Challenges' section, which is a step forward –as it has been included– but its ambition is still limited. Four main areas are highlighted: BELLA undersea cable, cybersecurity, digital standards' definition and interoperability, and digital skills. Also, in formal science and technology cooperation agreements between the EU and Argentina, Brazil, Chile and Mexico individually, only Argentina's has a brief reference to ICTs, and Brazil's to space cooperation and the undersea cable. The LAC-EU Digital4Development (D4D) Hub is a window of opportunity, although its implementation remains to be explored because it has only recently been launched.

As for Korea, its traditional approach to Latin America has been channelled through official development assistance (ODA) and the Knowledge Sharing Programme (KSP). The KSP has only arranged two digital-related programmes on the ground, and 10 technology and science-related projects, which have a targeted time and funding, such as institutional strengthening in technical regulation in Ecuador and spectrum reform in the Dominican Republic.

In terms of how 'political trust' is unveiled, 2022 is foreseen by Korea as a time of political momentum to cooperate with Latin America more intensively. It celebrates its 60th anniversary of diplomatic relations with 15 countries, and the MFA aims to 'boost understanding between' both sides and foster 'high-level exchanges'. In the technology realm, Korea argues the need to cooperate with Latin America due to two reasons. First, Latin America is increasing its cooperation with China as a way of decreasing its traditional reliance on the US, but this has created a new weaponised interdependence on a single country. Korea aims to be an alternative, additional country, beyond this 'utilitarian route between the US and China'. Secondly, Latin America has been severely hit by COVID-19 and Korea aims to support its technological assets as sustainable, sustained projects in the long run. The Korea-LAC Digital Cooperation Forum held in March 2022 was driven by the words of 'mutually-beneficial cooperation', 'share', 'values' and 'inclusiveness', 'tailored' projects to each country's needs, 'reduction of digital divide' and 'win-win associations'.

Going back to the role of thematic diplomacy by middle powers, several conclusions arise. First, both Spain –and the EU– and Korea still lack a coherent, top-level, strategic mandate for technology cooperation with Latin American countries from a solid foreign

policy perspective. So far, projects have been carried out through a scattered governance model, *ad hoc* targeted projects in scope, time and audience. However, there is a growing trend: Spain has acknowledged the importance of technology to seize SDGs on a level playing field; the EU's Global Gateway aims to leverage on this global infrastructure macro-strategy to provide Latin American countries with projects on technology, highlighting the importance of 'equal partnerships', ensuring that there is an 'exit strategy' (this is, that donor countries do actually leave the project when its implementation stage is completely finished, and they also ensure that recipients will have full ownership of these technologies with no, or limited, dependencies). As for the Korean side, its approach to Latin America on technology cooperation has largely focused on economic competitiveness and innovation, but the 2022 roadmap appears to have added a new focus on reducing the digital divide and other social challenges, and also a geopolitical perspective (how to counter China's rising influence and offer an Asian alternative).

Conclusion

Latin America, jointly with Spain and Korea, may benefit from the world's current momentum in the acceleration of digital transformation and the needs that may be addressed and fulfilled by countries other than the great powers, China and the US.

There is a far greater scope for improvement in trust. There is a need for middle powers to explicitly acknowledge their intention to leverage on projects with Latin America on a level playing field –not only in its mandates, but also in the impact assessment once projects are fully implemented–. It is clear that Spain and Korea do not aim to weaponise interdependence on technology through chokepoints and panopticon effects, because they apply trustworthy principles in their mandates, but both countries would benefit from providing mandates and narratives on how they can contribute to an equal, global values-based international order on technology while promoting their own interests in third countries, especially in medium- and low-income regions.

Cooperation on technology at the global scale is not only about economic exchanges and infrastructure implementation. It is also about values and democratic principles. In this case, Spain has been one of the few countries to launch a Charter of Digital Rights. Also, Spain and Korea channel a large part of their ODA through international mechanisms monitored by the OECD. The United Nations Roadmap for Digital Cooperation and the UN Special Envoy on Technology are two spaces to be seized by Latin America and these two countries to benefit from a common platform where projects may be delivered while complying with international standards.

Also, it is not only about Spanish-Latin American or Korean-Latin American cooperation. Spain and Korea, as middle powers that are gaining terrain in certain technology areas, can play a major role in promoting geopolitical and citizen trust with Latin America counterparts at a time when great-power rivalry is present.

Working on a solid trust between these three actors is not only necessary but also beneficial: it entails confidence in the long run, fluid communication lines, mapping of common needs and complementarity both at times of peace and of technological 'crisis'.

For this to happen, several policy recommendations are suggested:

1. Spain and Korea, as middle powers, should monitor data on technological cooperation with Latin America. This data should be available in disaggregated terms: figures on how technological cooperation occurs should not only be part of the package of data on development cooperation or financial topics. It should have its own box. This will ease oversight and follow-up in this important topic.
2. Latin America, Spain and Korea should include in their foreign policy mandates that trust is a strategic element of their technology cooperation with third actors. Due to the specific nature of technology, trust should refer to 'digital trust' in the tool designed, deployed and implemented (referring to citizen trust in this tool), and also trust should talk on the geopolitical implications of negotiating with a third partner a technological issue (ie, how bilateral or trilateral agreements could leverage on equal partnerships, exit strategies, ownership over technological assets and the reduction of inequalities).

Spain should leverage its Presidency of the Council of the EU in 2023 to include the Latin American-technology nexus in its mandate. Also, taking into consideration that the EU is building up Digital Partnership Agreements with Asian countries, additional cooperation with Korea would be a window of opportunity at both the EU level and for Spain when it channels some of its efforts through the Union.

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