Digital transformation in developing countries

Promotion and adoption should be the main actions for companies and government

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Arthur D Little

Content

Authors:

Alejandro Gonzalez
Partner Operations Management,
Houston
gonzalez.alejandro@adlittle.com

Guillem Casahuga
Partner, Telecommunication, Information,
Media & Electronics, Houston
casahuga.guillem@adlittle.com

Ansgar Schlautmann
Partner, Telecommunication,
Information, Media & Electronics,
Frankfurt
schlautmann.ansgar@adlittle.com

Mauricio Romero
Manager, Telecommunication,
Information, Media & Electronics,
Bogotá
romero.mauricio@adlittle.com

Executive summary

We believe it is a mistake to equate the digital-economy development needs and implications of Latin America (and other developing countries) with those of developed economies. These differences are not only based on the purchase-power gaps that every businessperson is aware of, but also how all market forces differ in the two regions.

In Figure 2 of this paper, we state how the populations in developing economies (taking Latin America as the example) differ in most of the key attributes needed to drive the development of the digital economy. These include:

- Lower internet access and connectivity
- Mobile services usage being driven to voice instead of data consumption
- Millennials' limited access to and contact with technology
- Less access to banking and electronic payment services

Considering these important demographic, connectivity and requirement gaps between the economies, we explain how companies and governments in developing economies need to pursue a specific approach to ensure development of adequate digital economies.

Governments have an important challenge to promote acceptance of new technologies and ease of digital adoption by populations and companies. Some of the recommended actions are energizing digital acceptance with holistic digital public policies, measuring the digital impact in economies and promoting digital telecommunications infrastructure, redefining traditional regulatory framework and institutions, fostering digital and banking penetration, and understanding the implications of each new business model in order to quickly react.

Management should engage the organization with a digital culture and vision that integrates market and operational advantages, continuously push better digital interaction tools with customers and stakeholders, ensure digital trust, and accelerate the adoption of new and mature technologies. Closing the digital gap will require effective coordination between regulators and companies, which today seems to be a major challenge.

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1. Digital needs are not the same in developing or developed economies

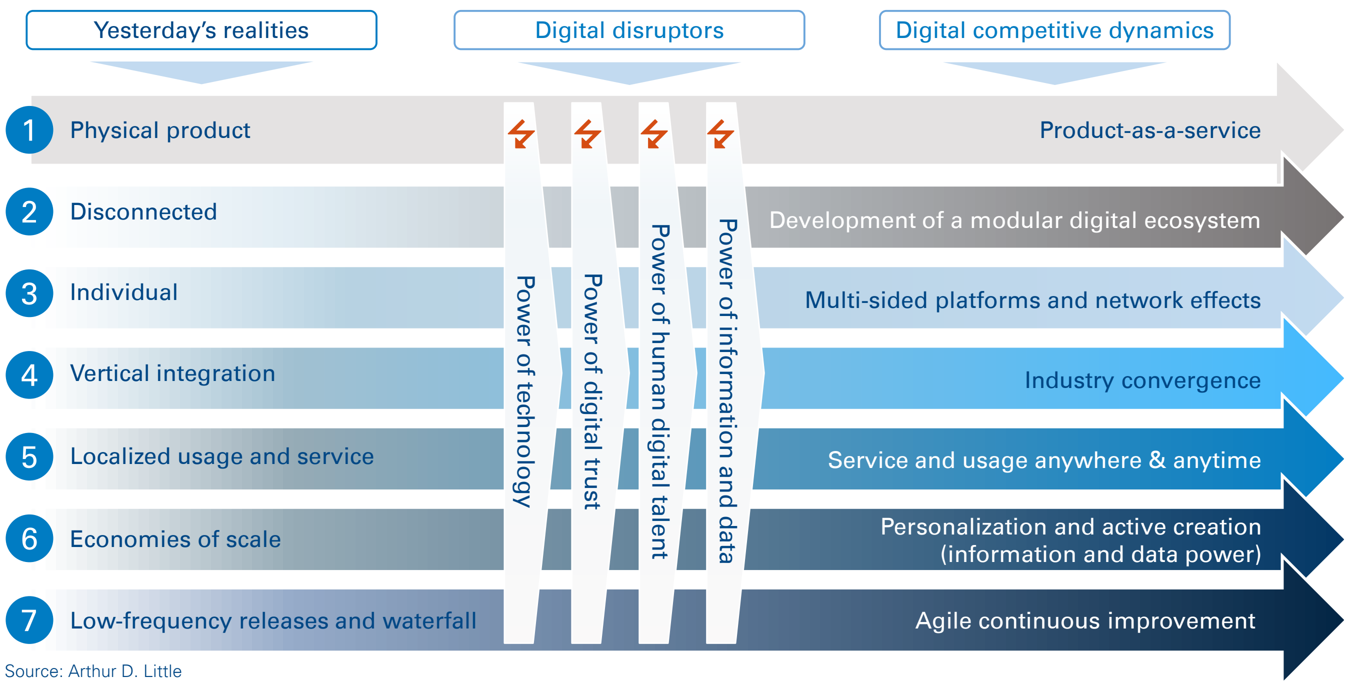
From both a personal and a business perspective, digitalization has common ground across different geographies. Millennials, considered the first global generation, have a broader range of commonalities than previous generations – access to similar hardware and media or usage of similar apps and tools. Furthermore, digital disruptors and competitive dynamics influencing the economy are very similar across geographies.

We might assume that all millennials have similar digital expectations regardless of their country or culture, and the approach to marketing to them should be the same globally. However, as we go deeper with infrastructure, sociodemographic traits, requirements by users and business and competitive dynamics, there are considerable differences in the needs for digital transformation among developing economies in Latin America versus developed nations. The applicability of these digital trends varies by industry and the digital maturity of the country.

In terms of the mobile industry as the driver for service anywhere and anytime, specific gaps between Latin America and developed countries have to be considered. As regards mobile subscription penetration, there are similar behaviors, with 110–113 subscriptions per 100 inhabitants, but typologies differ heavily. Voice is still the value driver for Latin American mobile users, representing 60 percent of their subscription costs and leaving the remaining 40 percent for data packages. Comparing this data share to the 55 percent average spend per subscription in developed countries, it is reasonable to assume that there are major differences between mobile phone users in these markets.

This situation becomes even more evident when we take into account that Latin America has average revenue per user (ARPU) of USD 11.20 per month, versus USD 29.40 in developed markets. This triggers lower affordability of mobile services in Latin America, given that the GDP per capita is less than

Figure 1: Digital disruptors and competitive dynamics



Source: Arthur D. Little

one-fifth compared to developed regions. In terms of internet-usage penetration, Latin America ranks far lower than developed countries. According to the World Bank, only 54.5 percent of Latin American citizens use the internet on a regular basis, compared to 84 percent in developed economies. Furthermore, this gap is more dramatic if we take into account the segment of the 60+-year-old population, for which Internet adoption is only 11 percent in Latin America, versus 25 percent in developed countries. Additionally, the quality of connectivity differs from one market to another. Despite the mass-market deployment of 4G mobile technologies, fixed broadband, as the main option to ensure high-quality and unrestricted traffic connectivity, has different penetration. As an example, there are 39 connections per inhabitant in developed countries, versus only 10.5 in Latin America. This is forcing a major share of the Latin American population to connect via mobile broadband with coverage, spectrum saturation and traffic restrictions.

In terms of sociodemographic traits and user requirements, millennials (accounting for 41 percent of the population in Latin America, versus 31 percent in developed countries) are not that similar. The main differences are due to less access to digital electronics – which are considered a luxury product and more vulnerable to theft – less trust in digital transactions, and lower internet penetration. Low digital trust affects the development of the sharing economy and digital financial services. Based on these demand requirements, the digital supply is lacking the mainstream presence of online consumer advocacy groups, price-comparison platforms and brand investigative sites seen in developed economies.

Regarding digital penetration in the small and medium-sized enterprises (SME) segment, the perspectives are also very different, as developed economies have increased usage and adoption compared to developing ones. In Mexico, for instance, only 10 percent of SMEs have online sales, even though they represent 72 percent of employment and above 50 percent of GDP[2]. This is small penetration compared to the 20 percent of EU-28 SMEs with online presence.

Lastly, public opinion's main areas of concern are different. According to the European Commission's Eurobarometer, the main areas of concern for Europeans are immigration, unemployment, public finance of member states, and terrorism, while Latin Americans are concerned about labor and economic stability, social and gender inequality, corruption and crime.

Figure 2: Comparing the situations [2]

Criteria	Emerging economies in LATAM	Developed economies
Internet penetration	54.5%	84%
Digital confidence	Weak confidence in digital transactions and trust	Strong confidence in digital
SME digital adoption	Reduced SME digital adoption	Increasing SME digital adoption
Labor productivity impact	Low labor productivity	High labor productivity
Implications of digital	Strongly skewed by industry	More holistic approach and adoption
Banking products coverage (age 15+)	51.4%	96.6%
Credit card users (age 15+)	21.6%	52.2%
Debit card users (age 15+)	40.4%	85%
Digital start-up activity (Top 10)	40% in top 10 for emerging and only Brazil included	60% in top 10
Telecom infrastructure investment	Lower investment levels	Higher investment levels
Telefónica Index on Digital Life 2016 – 34 countries scored over 100	Chile (#11 – 70.4), Colombia (#14 – 67.4), Perú (#26 – 57.3) and Nicaragua (#33 – 70.4)	US (#1 – 96.3), UK (#4 – 88.7), Germany (#5 – 81.0) and Spain (#14 – 70.1)

Source: Arthur D. Little

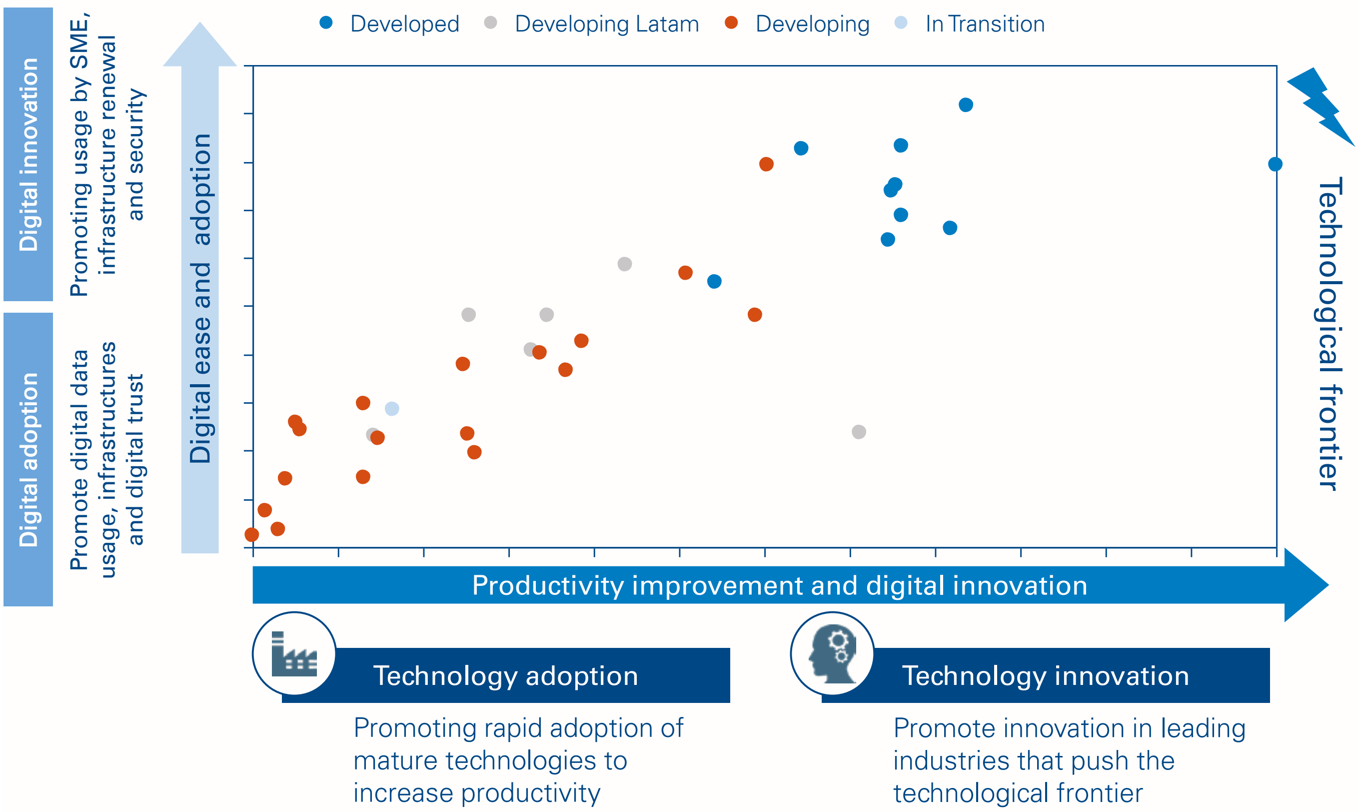
2 According to CEPAL, in Latam and Caribbean it represents 61% of employment and almost 30% of GDP

2. How should the approach differ?

Considering such differences, should there be a different approach to digital in emerging markets? The dilemma immediately comes out: should companies and regulators in emerging markets build digital from the experiences of other countries, or should they leapfrog to innovation based on smart adoption of new technologies? Our opinion is that, while some mature economies focus on innovation to push the technological frontier and attain further productivity growth, the main concerns in developing markets should be broadening access to digitalization and adopting mature technologies as quickly as possible to improve productivity and, consequently, competitiveness.

These different sets of concerns imply that management at both companies and governments/regulators should work on digitalization from another perspective, promoting the basics – improving the digital infrastructure, fostering digital inclusion and digital human capital, and ensuring rapid adoption of proven, mature technologies.

Figure 3: Positioning in Digital and technology adoption



Source: Arthur D. Little

3 Telefónica index based on three pillars: digital openness, confidence and entrepreneurship. Full report at http://indexdigitallife.telefonica.com

3. Approach for government and regulators

Governments and regulators in developing economies should focus on promoting adoption and realizing the advantages of the digital economy, encouraging digital inclusion and trust across different segments of the population that digitalization often leaves behind. According to Arthur D. Little's recent project experience in outlining digital-economy agendas for developing countries, the main challenges and the recommended actions, ranked by importance, are:

- Energize digital acceptance and culture through a holistic public policy in ICT that integrates different government bodies from two angles:
  - Demand side: Facilitate and increase knowledge, confidence and volume of transactions on digital platforms, and build digital trust among users by implementing consumer protection initiatives (e.g., privacy) to make up for the current absence of consumer advocacy groups. Colombia launched "Plan Viva Digital 2010–2014" with notorious connectivity success across households and SMEs. It is not continuing this with "Plan Vive Digital 2014–2018" to increase penetration in unfavored segments and usage in currently connected ones.
  - Supply side: First, promote the development of digital talent to reduce the large deficit of qualified professionals, which inhibits the adoption of technologies and disruptive change. Second, facilitate the development of digital companies through promotion of new technologies and regulatory sandboxes[4].
- Measure the impact of digital in the economy to determine and track what is the impact on GDP and employment creation with a clear dashboard that can be followed by different stakeholders.
- Accelerate and promote investment in digital infrastructure. Current telecommunications infrastructure cannot ensure coverage and quality of connectivity for adequate evolution of the digital economy, and investment is not promoted, as distribution between the required investment and the beneficiaries is not equal.
- Confront slow and restrictive digital regulation: regulation designed from an "analogue" or traditional economy standpoint, which delays the entrance of a digital era (e.g., laws aimed at strengthening traditional channels or face-to-face requirements).
- Integrate externally: as digital has no frontiers, it is relevant to integrate countries in the same regions by promoting common digital integration and understanding. Latin America should take advantage of being "one step behind" developed regions, and learn from their experiences to be better prepared for digital disruption.
- Integrate internally: conflicts among different regulatory bodies demand the integration of multi-stakeholder committees that assure approaches are consistent with industry convergence promoted by digitalization. As an example, Singapore merged its media and infocomm regulators into "IMDA" to promote the country as a "Smart Nation" in 2025.
- Seek balanced regulatory requirements between digital and traditional: Balanced regulation needs to be promoted. This should, first, not place a burden on companies due to their technology, which would hinder free competition, and, second, seek equal conditions based on consumer usage and transferability of services.
- Promote E-government capabilities: according to the United Nations' latest worldwide e-government report, out of the top 30 e-government countries, only five were developing nations. This fact reflects the need for governments to encourage digital adoption and transactions from their citizens and improve government efficiencies. Uruguay is the first country in Latin America on e-government, and the Dominican Republic is recognized for its 911 emergency and safety system.
- Increase banking penetration: there is urgency to increase digital financial transactions. Digital means of payment have had very low penetration and, if there is no push to promote digital money transfer or payment, the transition to digital models will be more expensive and difficult.

4 Rules that allow innovators to test their products/business models in live environments without following some or all legal requirements

4. Digital approach for companies

As for the management of companies in developing economies, the emphasis should be placed on promoting technology to underline specific competitive dynamics that ensure the rapid adoption of mature technologies, with major impact on productivity increases. Thus, recommendations to accelerate digital evolution for companies in developing economies are:

- Align and engage the organization with a digital vision to secure a holistic approach. In a recent survey of 30 CDOs at corporations operating in Latin America, 78 percent declared an understanding of the impact of digital, but lacked a holistic view. (Fifty-three percent considered operational models, 47 percent business models and 38 percent customer interactions.)
- From the competitive dynamics mentioned, companies in developing markets focus on service and usage anywhere, anytime, and improved operations. Thus, some actions recommended are:
  - Develop tools to better interact with customers and other stakeholders, but ensure adoption and usage are promoted and incentivized, as user ramp-up is slower for developing economies.
  - Promote digital inclusion of customers with digital offerings, ensuring digital trust.
  - Improve system architecture for increased third-party and data integration, cloud capabilities and agile development.
  - Seek to adopt mature technologies that boost productivity by defining a new digital operating model aligned with Industry 4.0 requirements of flexibility, customer proximity, product personalization and reduced time to market.
  - Select mature technologies that can easily deliver productivity improvements, and define a future technology roadmap to promote a disruptive digital business model.
- Seek new business models and ecosystems to innovate the digital value offering, but integrate with the operating model to ensure a consistent digital transformation pathway.
- Encourage quantification of digital initiatives based on the bottom line and define a digital dashboard.
- Ensure acceleration of digital culture and capabilities with promotion and education of digital talent. Work on closing the capabilities gap so companies have access to skilled resources.
- Integrate companies in industry groups to facilitate communication with the government and other related entities.

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Conclusions

Beyond recommendations for players - government and companies -, increased coordination is required among them. We have observed that there is no agreement among main regulators and companies on how digitalization is transforming current market ecosystems in Latin America, and on how this transformation should be addressed. In our interactions with key players (public and private), we have seen a broad spectrum of priorities and concerns, which suggests a lack of coordination on this topic. Hence, a holistic and integrated approach to promote digital transformation is key to accelerate digital transformation on developing countries.

Thus, considering the differences between Latin America´s developing economies and developed ones in the rest of the world, the approach for the former should focus not on becoming an innovation hub and pushing the technology frontier, as many major economies are aiming to do. Our recommendation for developing economies is to increase adoption, foster digital trust and develop tools to boost overall productivity, social inclusion and upgraded living standards. If this is achieved, digital transformation benefits can be realized and shared among consumers, companies and governments.

Notes

Contacts

If you would like more information or to arrange an informal discussion on the issues raised here and how they affect your business, please contact:

Argentina
Daniel Monzon
monzon.daniel@adlittle.com

Belgium
Francois-Joseph VanAudenhove
vanaudenhove.f@adlittle.com

Central Europe
Volker Pfirsching
pfirsching.volker@adlittle.com

China
Russell Pell
pell.russell@adlittle.com

Colombia
Mauricio Romero
romero.mauricio@adlittle.com

France
Mathieu Blondel
blondel.mathieu@adlittle.com

Hong Kong
Andrew Smith
smith.andrew@adlittle.com

India
Srini Srinivasan
srinivasan.srini@adlittle.com

Italy
Francesco Marcella
marcella.francesco@adlittle.com

Japan / Singapore
Yonoshin Mori
mori.yonoshin@adlittle.com

Korea
Kevin Lee
lee.kevin@adlittle.com

Mexico
Cesar Brena
brena.cesar@adlittle.com

Middle East
Morsi Berguiga
berguiga.morsi@adlittle.com

The Netherlands
Martijn Eikelenboom
eikelenboom.martijn@adlittle.com

Norway
Diego MacKee
mackee.diego@adlittle.com

Spain
Jesus Portal
portal.jesus@adlittle.com

Sweden
Niklas Brundin
brundin.niklas@adlittle.com

Turkey
Coskun Baban
baban.coskun@adlittle.com

UK
Phil Webster
webster.phil@adlittle.com

USA
Alejandro Gonzalez
gonzalez.alejandro@adlittle.com

Developing economies must take a differentiated digital transformation approach

Arthur D. Little

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