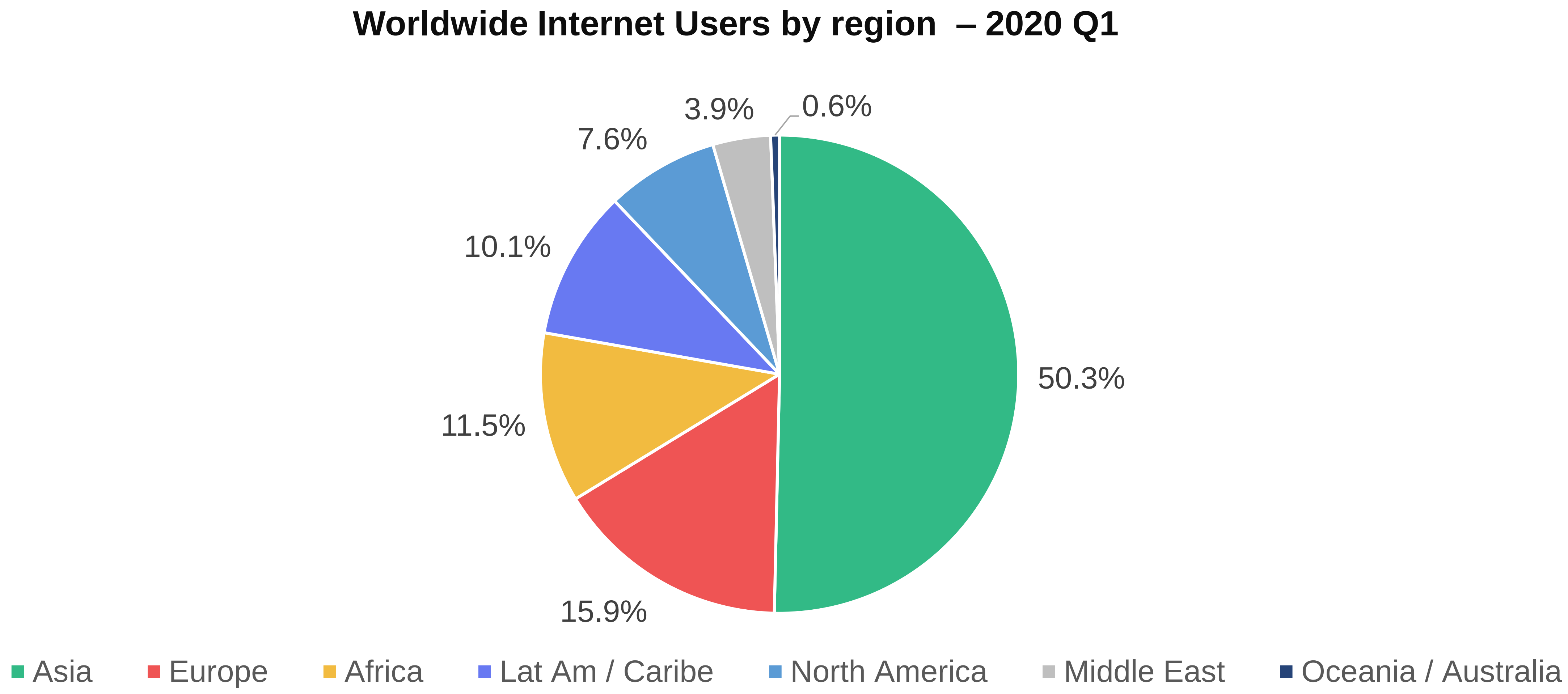
STATE OF DIGITAL ECONOMY: COLOMBIA

By: Alberto Pardo

2020

Content:

Latin America



SOURCE: INTERNET WORLD STATS – WWW.INTERNETWORLDSTATS.COM/STATS.HTM BASIS: 4,574,150,134 USERS IN MARCH 2020.

Latin America

World Internet Usage and population Statistics
2020 – Year Q2 Estimates

Africa	1,340,598,447	17.2 %	566,138,772	42.2 %	12,441 %	11.7 %
Asia	4,294,516,659	55.1 %	2,525,033,874	58.8 %	2,109 %	52.2 %
Europe	834,995,197	10.7 %	727,848,547	87.2 %	592 %	15.1 %
Latin America / Caribbean	654,287,232	8.4 %	467,817,332	71.5 %	2,489 %	9.7 %
Middle East	260,991,690	3.3 %	184,856,813	70.8 %	5,527 %	3.8 %
North America	368,869,647	4.7 %	332,908,868	90.3 %	208 %	6.9 %
Oceania / Australia	42,690,838	0.5 %	28,917,600	67.7 %	279 %	0.6 %
WORLD TOTAL	**7,796,949,710**	**100.0 %**	**4,833,521,806**	**62.0 %**	**1,239 %**	**100.0 %**

NOTES: (1) Internet Usage and World Population Statistics estimates are for July 20, 2020. (2) CLICK on each world region name for detailed regional usage information. (3) Demographic (Population) numbers are based on data from the United Nations Population Division. (4) Internet usage information comes from data published by Nielsen Online, by the International Telecommunications Union, by GfK, by local ICT Regulators and other reliable sources. (5) For definitions, navigation help and disclaimers, please refer to the Website Surfing Guide. (6) The information from this website may be cited, giving the due credit and placing a link back to www.internetworldstats.com.

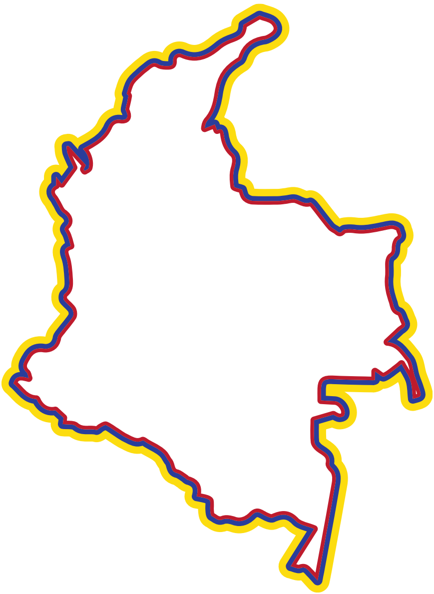
Colombia: Key indicators

Total Population

50.61
MILLON
Urbanisation
81%

Internet Users

37.00
MILLON
Penetration
73%



Mobile Phone Connections

60.38
MILLON
Vs. Population
119%

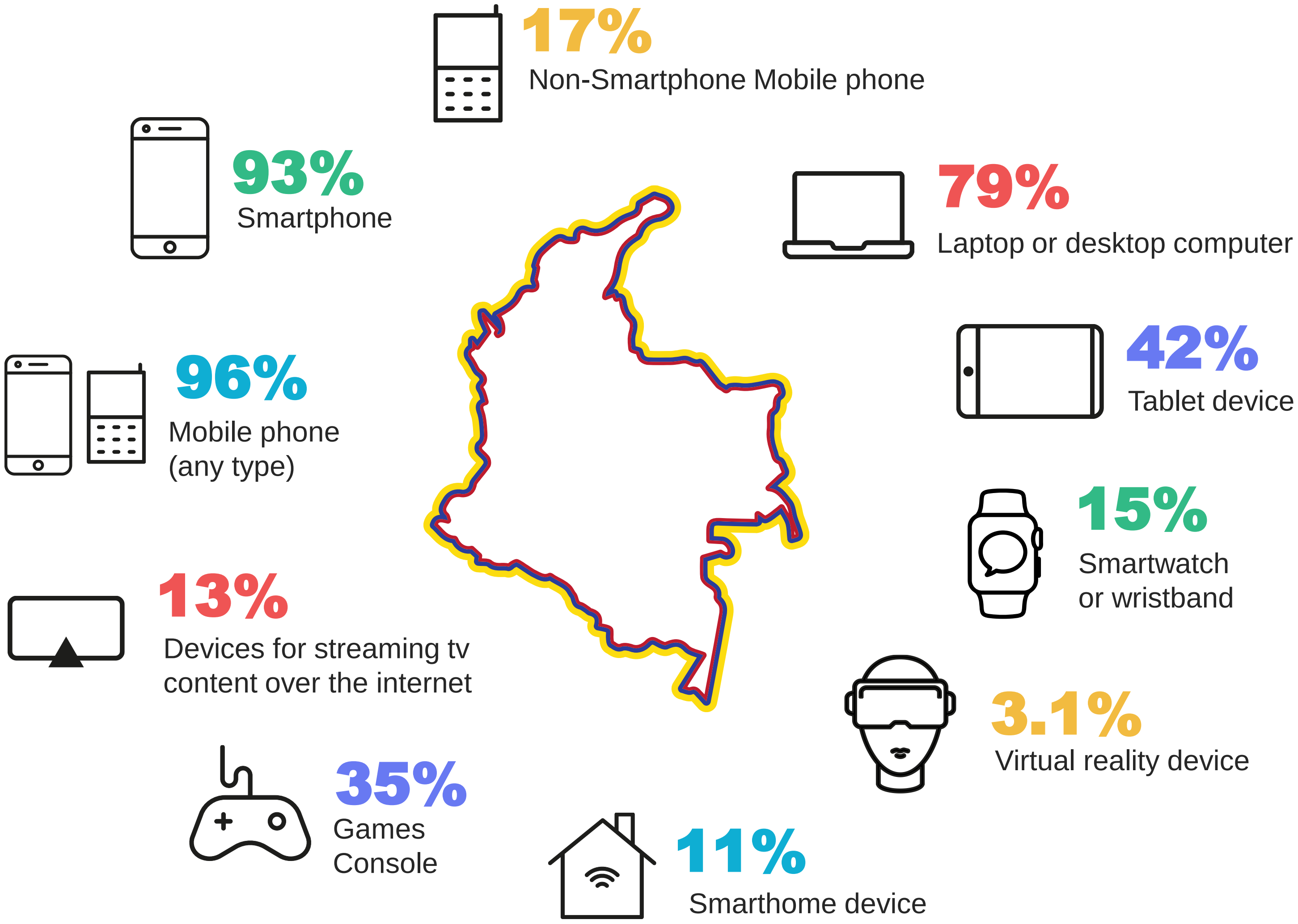
Active Social Media Users

35.00
MILLON
Penetration
69%

SOURCES: POPULATION: UNITED NATIONS; MOBILE: GSMA INTELLIGENCE; INTERNET: ITU; GLOBALWEBINDEX; GSMA INTELLIGENCE; EUROSTAT; LOCAL TELECOMS REGULATORY AUTHORITIES AND GOVERNMENT BODIES; SOCIAL MEDIA PLATFORMS' SELF-SERVICE ADVERTISING TOOLS; APJII; KEPIOS ANALYSIS; SOCIAL MEDIA: PLATFORMS' SELF-SERVICE ADVERTISING TOOLS; COMPANY ANNOUNCEMENTS AND EARNINGS REPORTS; CAFEBAZAAR. ALL LATEST AVAILABLE DATA IN JANUARY 2020. □ COMPARABILITY ADVISORY: SOURCE AND BASE CHANGES.

Device ownership

Percentage of **internet users aged 16 to 64** who own each kind of device

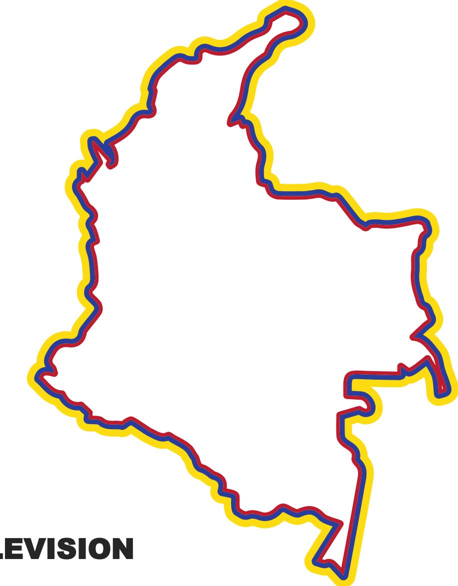


SOURCE: GLOBALWEBINDEX (Q3 2019)..

Media daily time spend

USING SOCIAL MEDIA
3H 45M

USING INTERNET
9H 10M



LISTENING TO MUSIC STREAMING SERVICES
1H 24M

USING A GAMES CONSOLE
0H 53M

WATCHING TELEVISION
3H 30M

Average daily time that **internet users aged 16 to 64** spend with different kinds of media devices

SOURCE: GLOBALWEBINDEX (Q3 2019)..

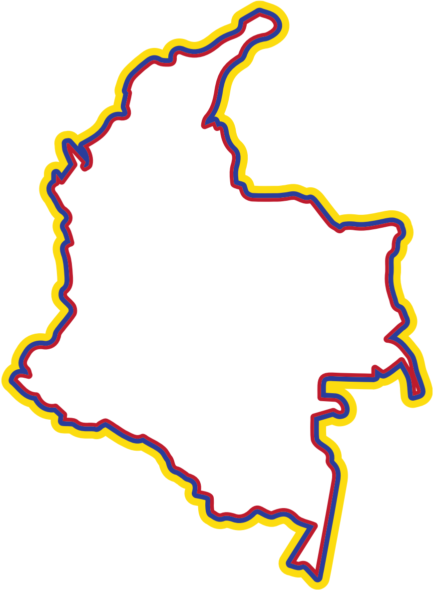
Internet use

INTERNET USERS AS A PERCENTAGE OF TOTAL POPULATION

69%

TOTAL NUMBER OF INTERNET USERS ON ANY DEVICE

35.00 MILLON



ANNUAL GROWTH IN THE NUMBEROF INTERNET USERS

+2.9%

+ 1.0 MILLON

AVERAGE DAILY TIME SPENT USING THE INTERNET ON ANY DEVICE BY EACH INTERNET USER

9H 10M

Number of people using the internet and how much time they spend using the internet each day

SOURCES: ITU; GLOBALWEBINDEX; GSMA INTELLIGENCE; EUROSTAT; SOCIAL MEDIA PLATFORMS' SELF-SERVICE ADVERTISING TOOLS; LOCAL GOVERNMENT BODIES AND REGULATORY AUTHORITIES; APJII; UNITED NATIONS (ALL LATEST AVAILABLE DATA IN JANUARY 2020). TIME SPENT DATA FROM GLOBALWEBINDEX (Q3 2019), BASED ON A BROAD SURVEY OF INTERNET USERS AGED 16 TO 64. SEE GLOBALWEBINDEX.COM FOR MORE DETAILS. ▯ COMPARABILITY ADVISORY: SOURCE CHANGES.

Internet Speed

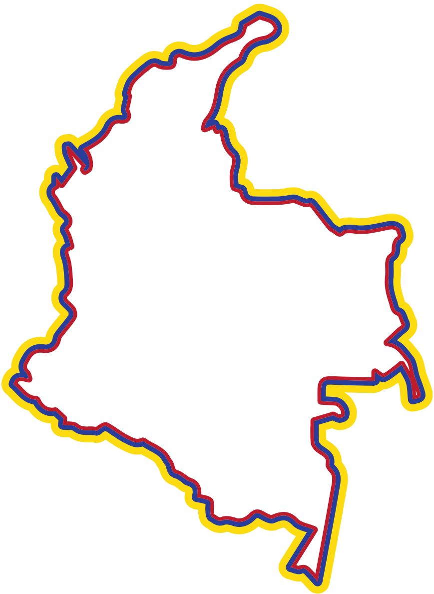
AVARAGE SPEED OF MOBILE INTERNET CONNECTIONS

18.71

MBPS

YEAR-ON-YEAR CHANGE IN AVERAGE SPEED OF MOBILE INTERNET CONNECTIONS

+6.7%



AVERAGE SPEED OF FIXED INTERNET CONNECTIONS

28.32

MBPS

YEAR-ON-YEAR CHANGE IN AVERAGE SPEED OF FIXED INTERNET CONNECTIONS

+77%

OOKLA (JANUARY 2020). FIGURES REPRESENT AVERAGE DOWNLOAD SPEEDS IN DECEMBER 2019, WITH COMPARISONS TO AVERAGE DOWNLOAD SPEEDS IN DECEMBER 2018.

Mobile connections by type

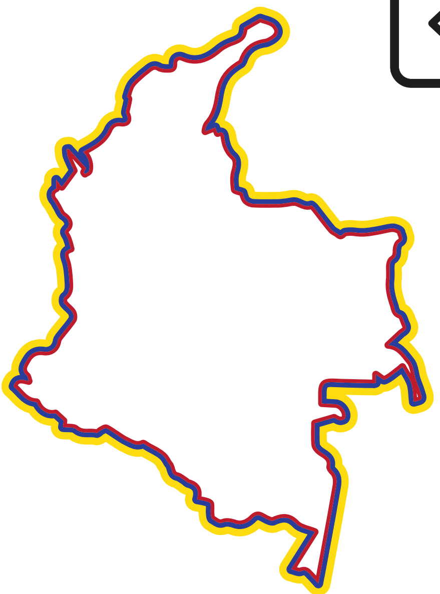
Overview of mobile conections with share by payment type and connections bandwidth

60.38%
MILLON

Number of mobile connections (excluding iot)

119%

Mobile connections as a percentage of total population



79%

Percentage of mobile connections that are re-paid

21%

Percentage of mobile connections that are post – paid

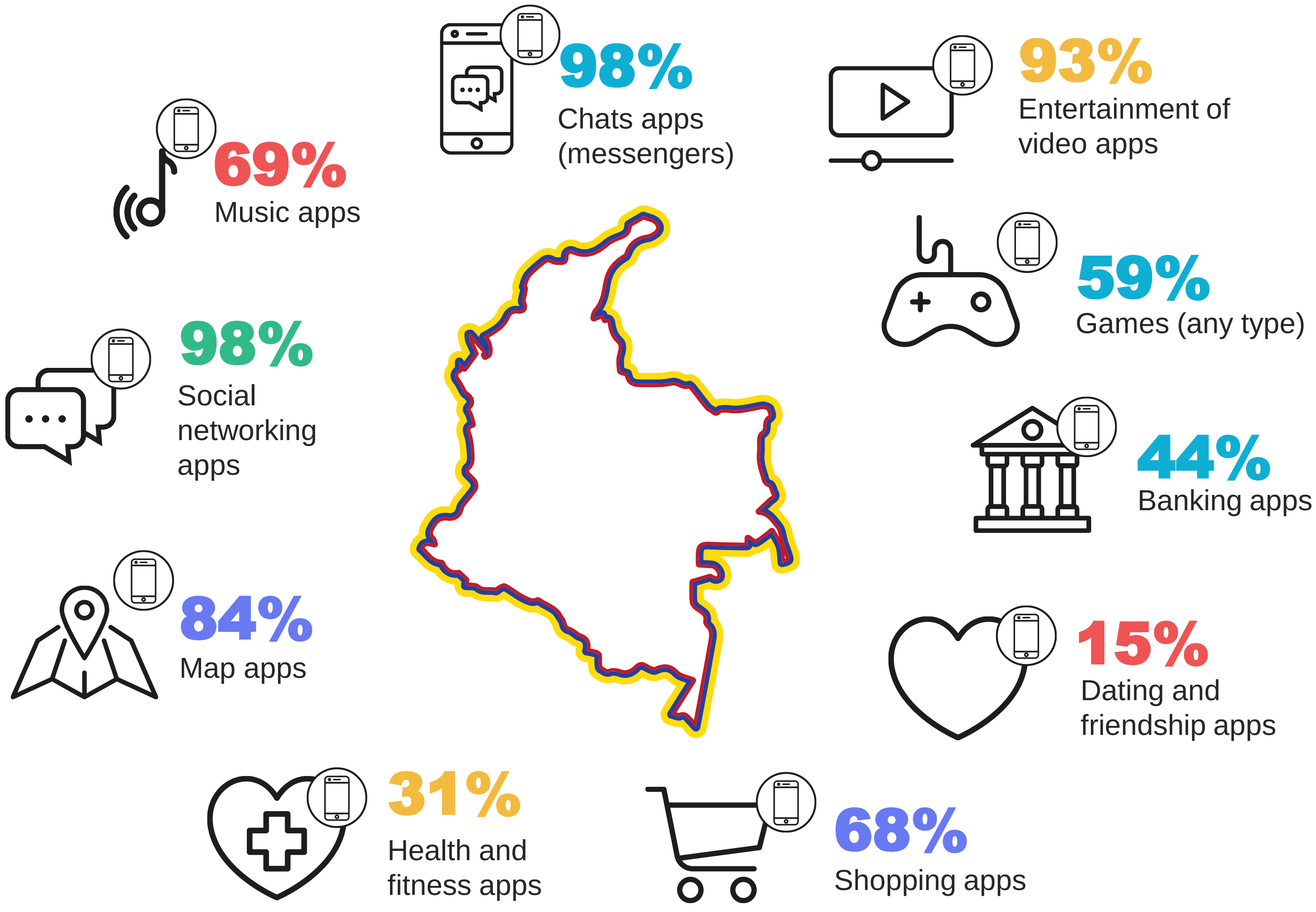
78%

Percentage of mobile connections that are broadband (3g-5g)

SOURCE: GSMA INTELLIGENCE (JANUARY 2020, BASED ON DATA FOR Q4 2019). NOTE: PERCENTAGES vs. POPULATION MAY EXCEED 100% DUE TO INDIVIDUAL USE OF MULTIPLE CONNECTIONS. TOTAL GLOBAL CONNECTIONS FIGURE QUOTED HERE DOES NOT INCLUDE IOT CELLULAR CONNECTIONS. □ COMPARABILITY ADVISORY: BASE CHANGES. SOME FIGURES MAY NOT BE DIRECTLY COMPARABLE TO DATA IN OUR PREVIOUS REPORTS.

Use of mobile apps by category

Percentage of **internet users aged 16 to 64** who report using each type of mobile app each month



SOURCE: GLOBALWEBINDEX (Q3 2019). FIGURES REPRESENT THE FINDINGS OF A BROAD SURVEY OF INTERNET USERS AGED 16 TO 64. SEE GLOBALWEBINDEX.COM FOR MORE DETAILS.

Most – visited websited (similar web)

WEBSITE	CATEGORY	MONTHLY TRAFFIC	TIME PER VISIT	PAGES PER VISIT
01. Google.com	Search	427.400.000	17M 43S	12.6
02. Youtube.com	Streaming video	315.200.000	37M 20S	13.2
03. Facebook.com	Social	148.000.000	18M 13S	18.3
04. Whatsapp.com	Social	55.040.000	3M 28S	2.0
05. Live.com	Search	52.690.000	10M 40S	10.2
06. Google.com.co	Seach	42.870.000	8M 03S	7.7
07. Netflix.com	Streaming video	30.370.000	10M 17S	4.9
08. Instagram.com	Social	20.670.000	10M 37S	25.7
09. Wikipedia.com	Reference	19.440.000	5M 37S	3.2
10. Twitter.com	Social	17.360.000	15M 08S	16.2

Ranking of top websites by average monthly traffic according to **similar web**

SOURCE: SIMILARWEB (JANUARY 2020

Key players in Government

El futuro es de todos — Presidencia de la República

Comisión de Regulación de Comunicaciones — República de Colombia

DNP Departamento Nacional de Planeación

Industria y Comercio Superintendencia

El futuro digital es de todos — MinTIC

4-72

RTVC Sistema de Medios Públicos

.CO™

Colombia Productiva — Productividad · Calidad · Valor Agregado

ANE

DANE — Información para todos

Computadores para Educar

Agencia Nacional Digital

Procolombia — Exportaciones Turismo Inversión Marca País

Centro Cibernético Policial

iNNpulsa Colombia

SENA

Colombia Compra Eficiente

Key players in private sector

CCIT Cámara Colombiana de Informática y Telecomunicaciones

Andesco ASOCIACIÓN NACIONAL DE EMPRESAS DE SERVICIOS PÚBLICOS Y COMUNICACIONES

Asomóvil

Alianza In

iab. COLOMBIA

COLOMBIA FINTECH

ANDI | MÁS PAÍS

Fedesoft

CÁMARA COLOMBIANA DE COMERCIO ELECTRÓNICO

PROPTECH COLOMBIA

BPro Asociación Colombiana de BPO

ruta N MEDELLÍN CENTRO DE INNOVACIÓN Y NEGOCIOS

CONNECT BOGOTA REGION

Cámara de Comercio de Bogotá

Invest in Bogotá

alt+co

Key players in private sector and civil society

Alianza CAOBA

CEA - IoT
Centro de Excelencia y Apropiación en Internet de las Cosas

Cintel
Proyectos TIC innovadores

Observatorio de Sociedad, Gobierno y Tecnologías de Información

CENTRO DE ESTUDIOS DE DERECHO DEL ENTRETENIMIENTO, TECNOLOGÍA E INFORMACIÓN-CENTI

RENATA COLOMBIA
Red Nacional Académica de Tecnología Avanzada

Fundación Karisma

C4IR.CO

Colnodo
Uso estratégico de Internet para el desarrollo

TELCO INDUSTRY: THE KEY TO DIGITALIZATION

Main Indicators (Q4 2019)

- 6,96 million fixed Internet access.
- Claro is the main fixed internet provider
- The average download speed is 18.9 Mpbs
- The main technology used for fix internet access is cable, followed by xDSL
- 30.9 million mobile internet access.
- Claro is the main mobile internet provider.
- The main technology used for mobile internet is 4G, followed by 3G.
- 66.28 million mobile telephone lines (14 million pospaid)

Key players

Colombia has four mobile network operators with their own network

- Comcel [América Móvil] –Claro is the trademark.
- Movistar [Telefónica]
- Tigo-Une
- Novator (WOM) who bought in 2020 Avantel

Mobile virtual network operators (MVNOs)

- Virgin Mobile
- Móvil Éxito
- Flash Mobile

The fixed line voice market currently has 18 participants providing local services and 10 participants providing long-distance services. Some of the players are:

- Claro (América Móvil)
- ETB
- Emcali
- Movistar

Key insights

- The service sector plays a major role in the Colombian economy, accounting for nearly 60% of GDP and 70% of the workforce (DANE, 2019).
- Telecommunications account for the largest share of information and communication technology (ICT) services (Going Digital Colombia).
- Over the last decade, digitalisation in Colombia has been accelerating and the ecosystem is getting bigger.
- Investments are particularly needed in the telecommunication sector to expand and upgrade networks, increase access to the Internet, and improve the overall quality of the communication infrastructure.
- Colombia has the lowest fixed broadband penetration among OECD countries.
- Most fixed broadband subscriptions are cable subscriptions and, despite a sharp increase in fibre connections in recent years.
- Exports of financial services are growing fast and the creation of Fintech start-ups in Colombia has been very dynamic compared to other LAC countries (IDB and Finnovista, 2017).

Key insights

- The average connection speed for fixed broadband networks ranks below the OECD average and its Latin American peers.
- Colombia’s fixed communication market is characterized by considerable market fragmentation.
- The fixed line voice market currently has 18 participants providing local services and 10 participants providing long-distance services.
- According to the OECD, Colombian communication markets are characterized by a high level of concentration (Going Digital Colombia).
- The country is well served by multiple submarine fibre cables (11 cables).
- Colombia currently only has one significant IXP to exchange traffic at the national level, the NAP Colombia (*http://nap.co*), which is located in Bogotá and run by the Colombian IT and Telecommunication Chamber. Only a very small number of companies are exchanging traffic at the Colombian IXP.

Key insights

- One of the major initiatives that can be commended in recent years is the deployment of a fibre backbone in a public-private partnership to connect most of the Colombian municipalities and the territory. Through this initiative, the number of connected municipalities grew from about 200 in 2010 to 1 108 in 2018. Some 1 808 public institutions could by then be connected through the fibre backbone (Going Digital document).

- The CRC undertook a careful analysis of the MVNO (Mobile Virtual Network Operator) market in 2016 and Resolution 5108 of 2017 defines certain obligations to facilitate agreements between MVNOs and MNOs so that MVNOs can access mobile networks more easily and have greater capacity to compete in the market.

Tax structure

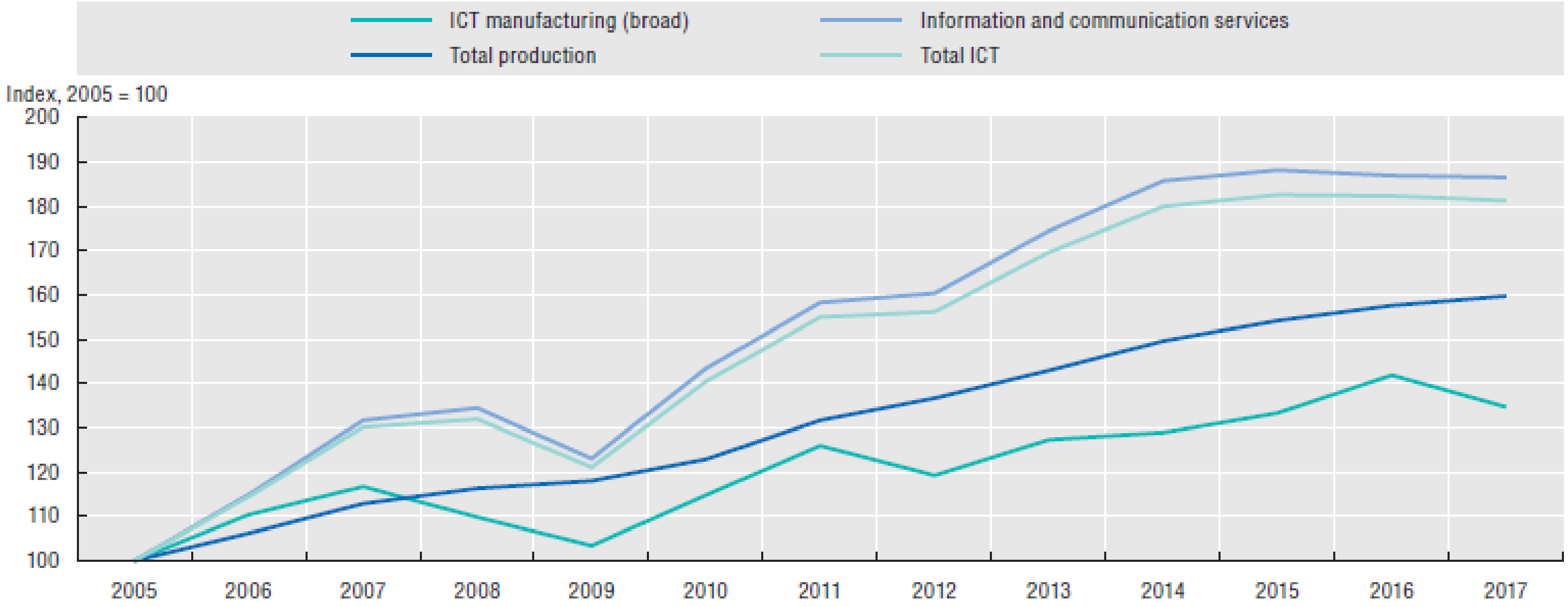
Currently, multiple taxes and fees are imposed on the consumption of communication services and on the communication sector. Taxes for consumers can be split into taxes on the usage of communication services and taxes on handsets (Table 2.3). Besides the standard value-added tax (VAT) of 19%, mobile voice and data services are subject to an additional tax of 4%.

	Description of the fee or tax	Amount
Taxes on the usage of communication services	Standard value-added tax (VAT)	19%
	Additional tax on mobile voice and data services (consumption tax)	4%
	Consumption tax exemption on mobile data services that cost less than COP 48 000 (around USD 15)	
Taxes on handsets	Standard VAT	19%
	Imported handsets: Custom duty	5%
	VAT exemption for handsets that cost less than COP 753 720 (around USD 238)[1]	

1. Exchange rate of January 2019.

Key Insights

Growth of value added in the ICT sector, Colombia



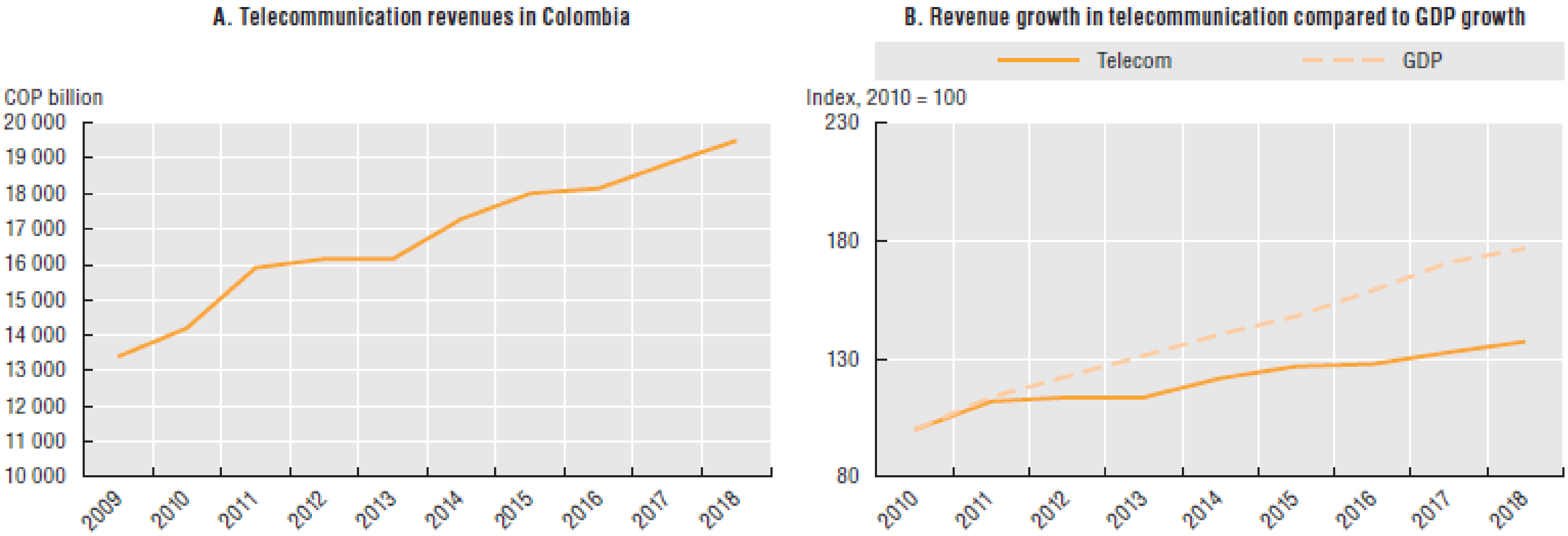
Notes: ICT = information and communication technology. Classification: CIIU Rev. 4 A.C. (60 groups). ICT manufacturing includes manufacturing of computer, electronic and optical products as well as electrical equipment (C52). ICT services include telecommunication services, IT services and consulting, broadcasting and media (J81-J84). Data for 2017 are preliminary.

Source: DANE (2019), "Principales agregados macroeconómicos, base 2015", *https://www.dane.gov.co/index.php/estadisticas-por-tema/cuentas-nacionales/cuentas-nacionales-anuales* (accessed on 15 April 2019).

SOURCES: Going Digital Colobmia. OECD.

Key Insights

Colombian GDP grows higher than Colombian telco revenues

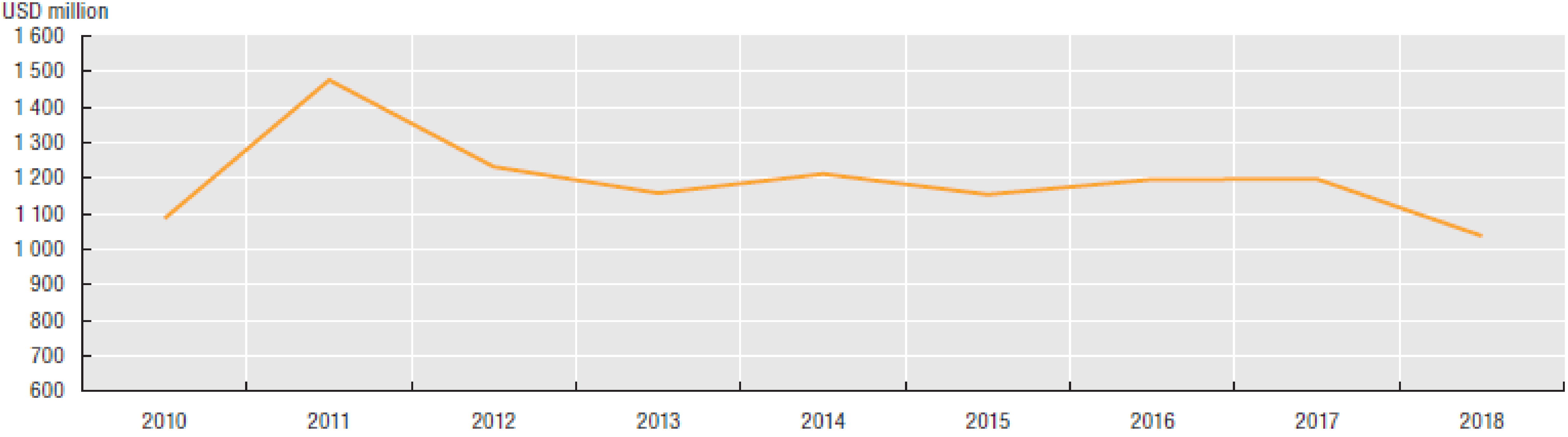


Note: GDP for 2018 is an estimate.

Source: OECD, based on CRC.

SOURCES: Going Digital Colobmia. OECD.

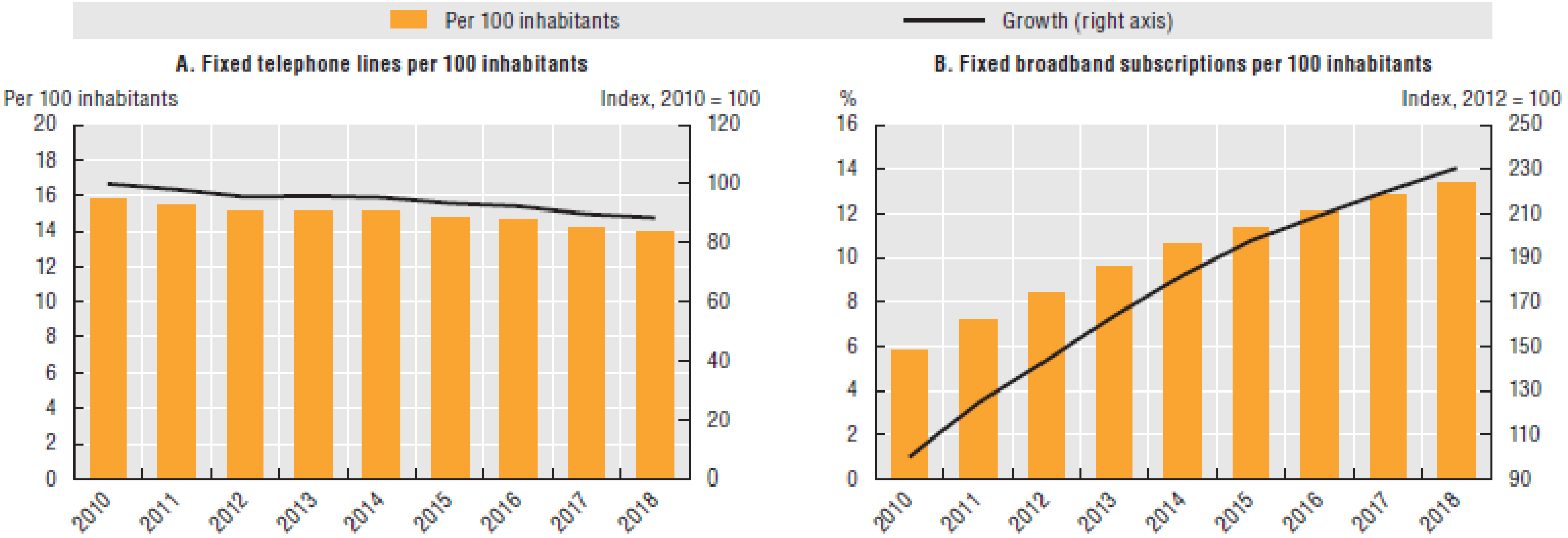
Investment in mobile telco infrastructure, Colombia 2010-2018



Source: GSMA Intelligence.

SOURCES: Going Digital Colobmia. OECD.

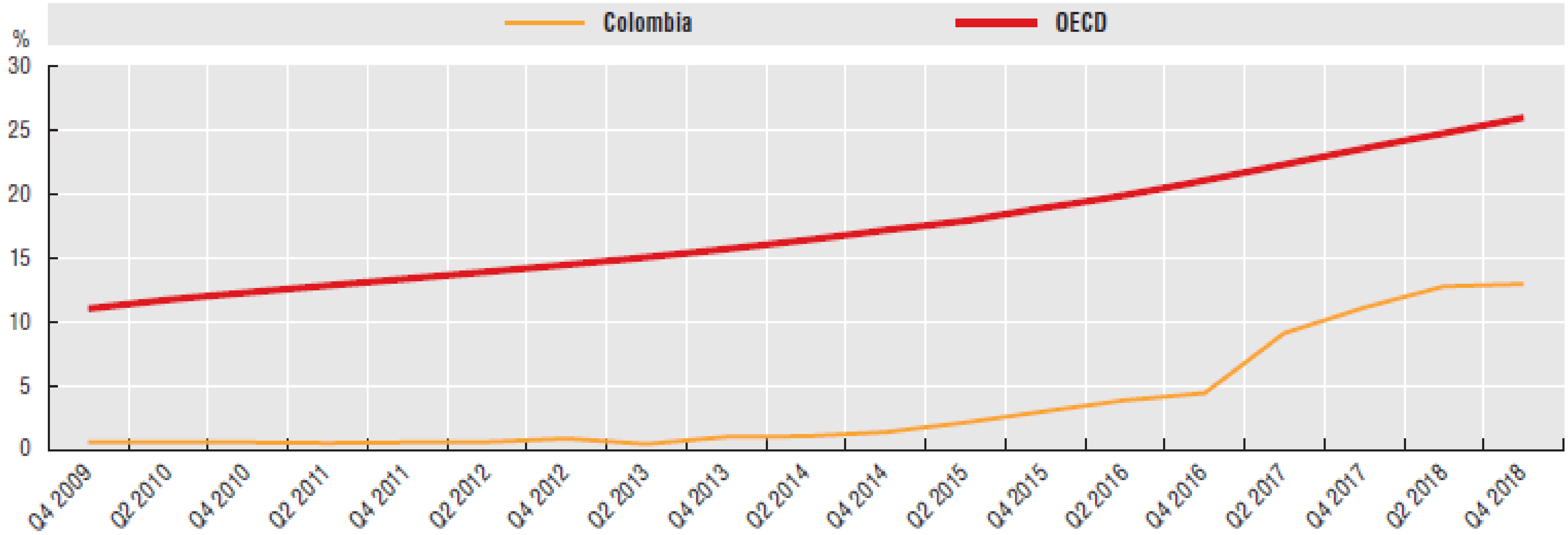
Fixed telephone lines slightly decreased while fixed broadband subscriptions rates increased



Source: OECD, based on CRC.

SOURCES: Going Digital Colobmia. OECD.

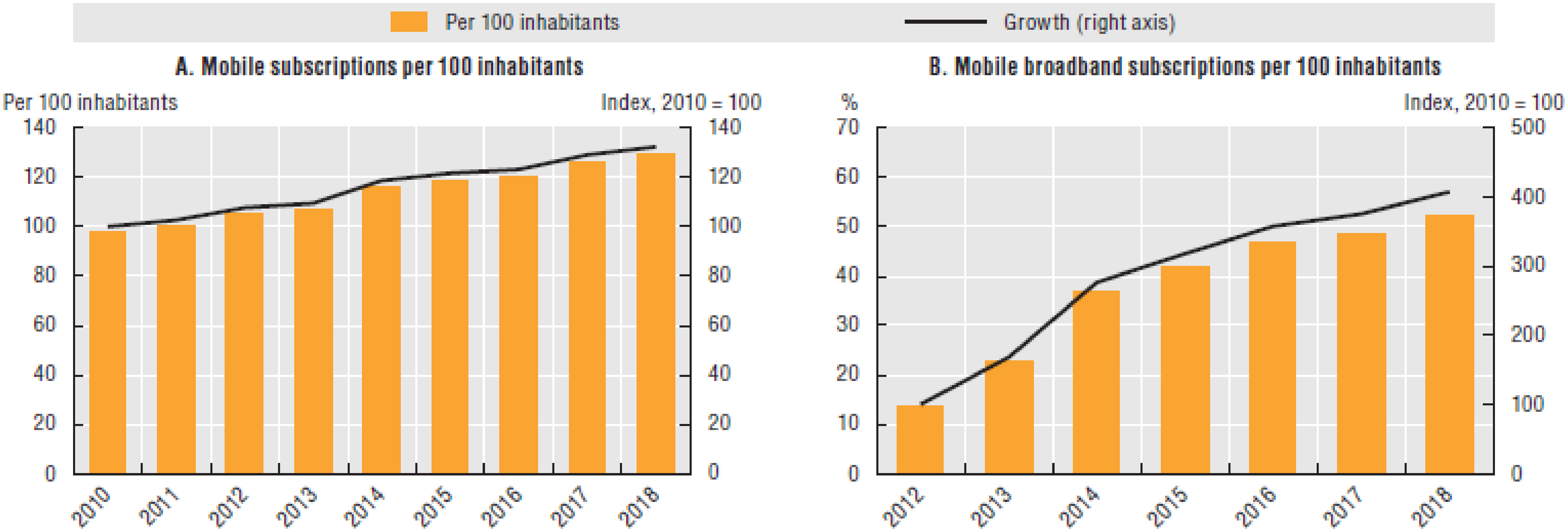
Fibre as a percentage of total fixed broadband



Source: OECD, based on CRC.

SOURCES: Going Digital Colobmia. OECD.

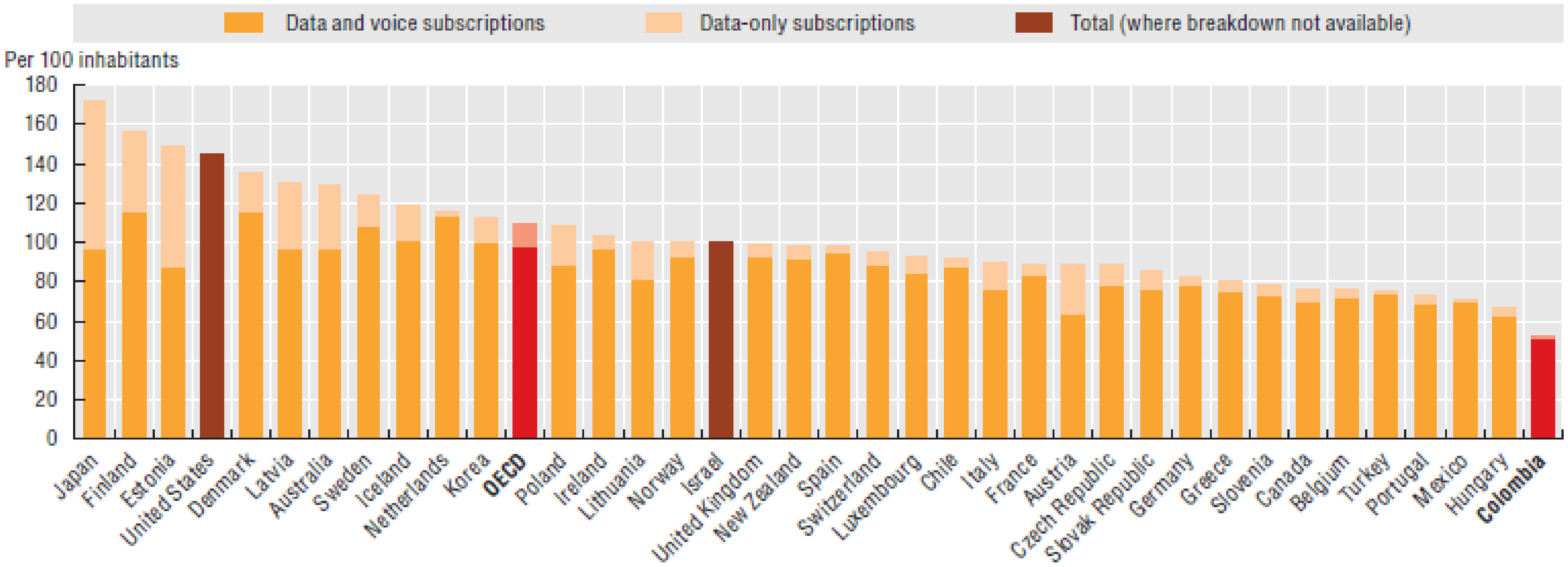
The use of mobile services has been the main driver for the increase in connectivity



Source: OECD, based on CRC.

SOURCES: Going Digital Colobmia. OECD.

OECD mobile broadband subscriptions per 100 inhabitants, selected countries, December 2018



Notes: Australia: Data reported for December 2018 and onwards are being collected by a new entity using a different methodology. Figures reported from December 2018 comprise a series break and are incomparable with previous data for any broadband measures Australia reports to the OECD. Data for Canada, Switzerland and the United States are preliminary.

Source: OECD (2019), *Broadband Portal, www.oecd.org/sti/broadband/oecdbroadbandportal.htm.*

SOURCES: Going Digital Colobmia. OECD.

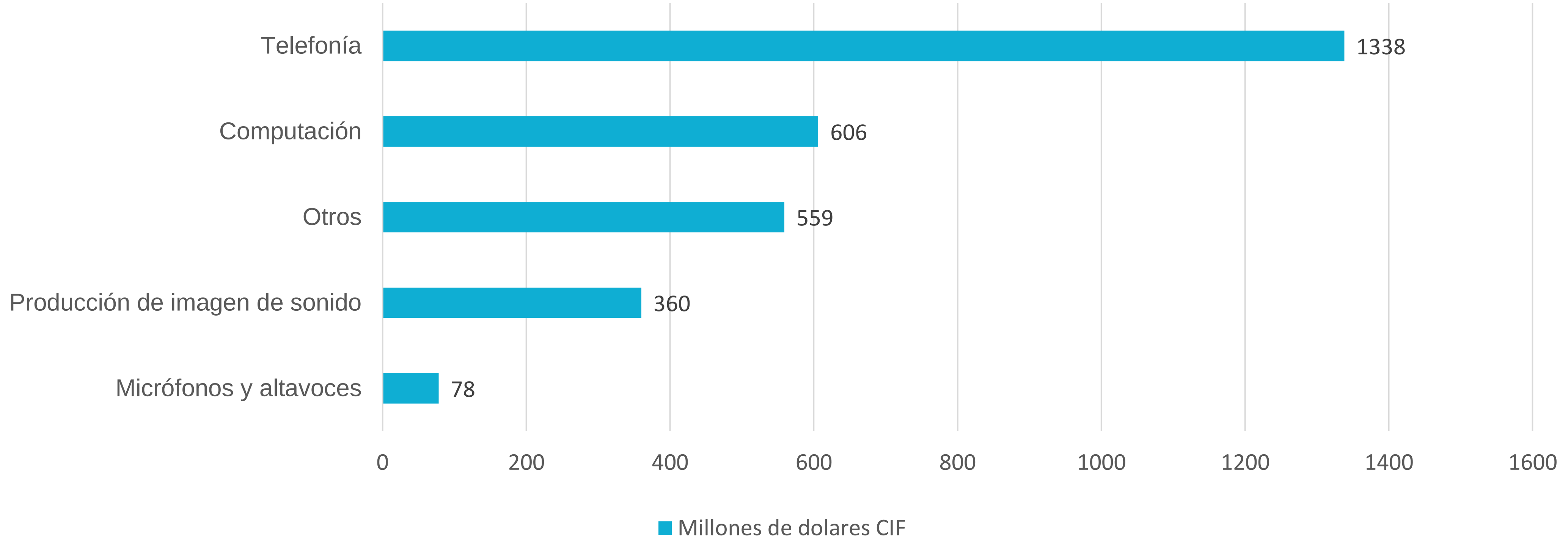
Submarine cables

	Cable name	Owner	Landing(s)	Length
1	Deep Blue	Deep Blue Cable	Barranquilla	12 000 km
2	San Andreas Isla Tolu Submarine Cable (SAIT)	Energia Integral Andina	(San Andrés), Tolú	826 km
3	South American Crossing (SAC)/ Latin American Nautilus (LAN)	Telecom Italia Sparkle, CenturyLink	Buenaventura, Riohacha	20 000 km
4	ARCOS	Consortium	Cartagena	8 600 km
5	Pacific Caribbean Cable System (PCCS)	Consortium	Cartagena	6 000 km
6	America Movil Submarine Cable System-1 (AMX-1)	América Móvil	Cartagena, Baranquilla	17 800 km
7	Maya-1	Consortium	Tolú	4 400 km
8	GlobeNet	BTG Pactual	Barranquilla	23 500 km
9	Pan American (PAN-AM)	Consortium	Barranquilla	7 225 km
10	South America-1 (SAm-1)	Telxius	Barranquilla	25 000 km
11	Colombia-Florida Subsea Fiber (CFX-1)	C&W Networks	Cartagena	2 400 km

1. *https://www.newsweek.com/undersea-cables-transport-99-percent-international-communications-319072.*
Source: TeleGeography (2018), "Submarine cable map", *https://www.submarinecablemap.com* (accessed on 30 July 2018).

Key Insights

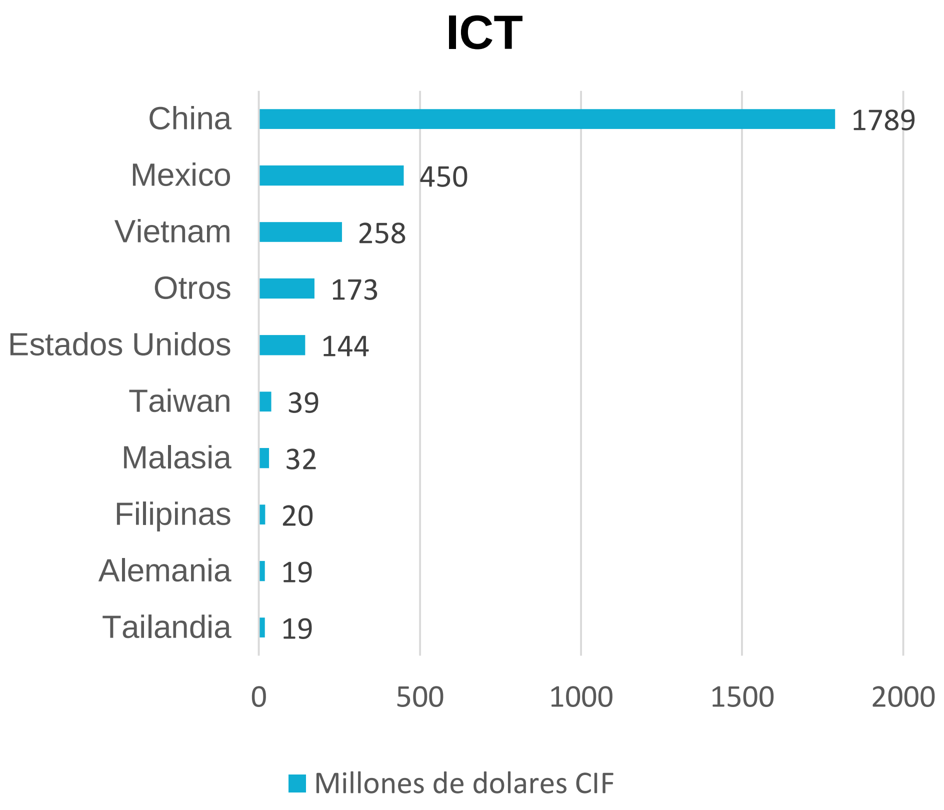
ICT industry imports 2H 2019

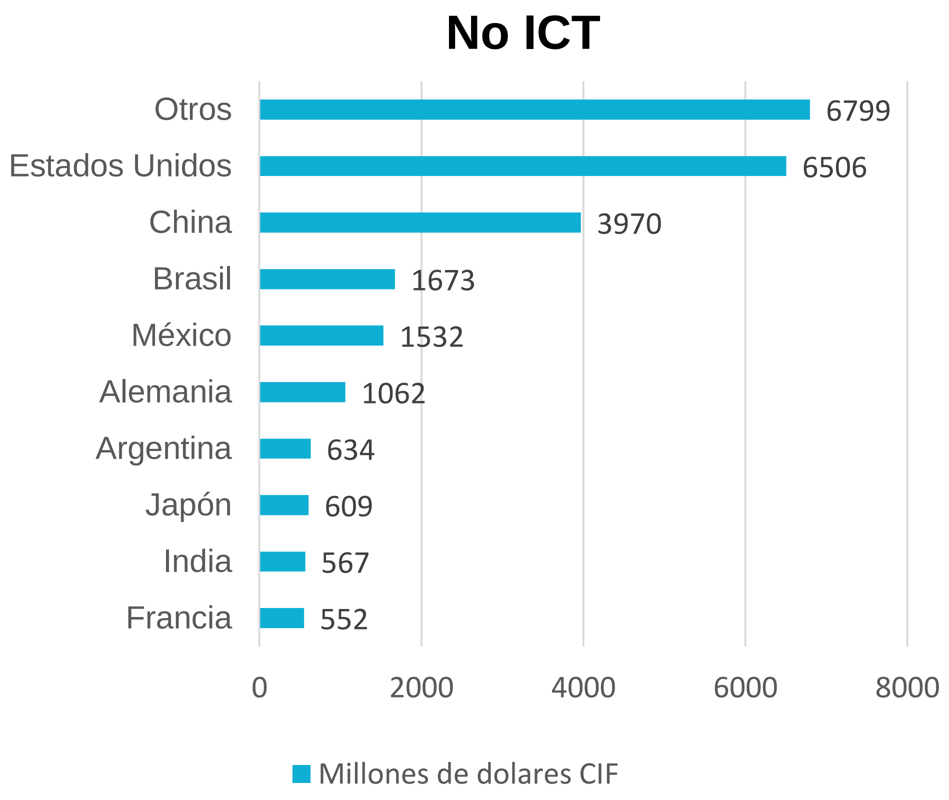


SOURCE: Boletín Sociedad Digital 2 semester 2019 (published July 2020 by MINTIC) Datos de DIAN, 31 de diciembre de 2019. Cálculos propios.

Key Insights

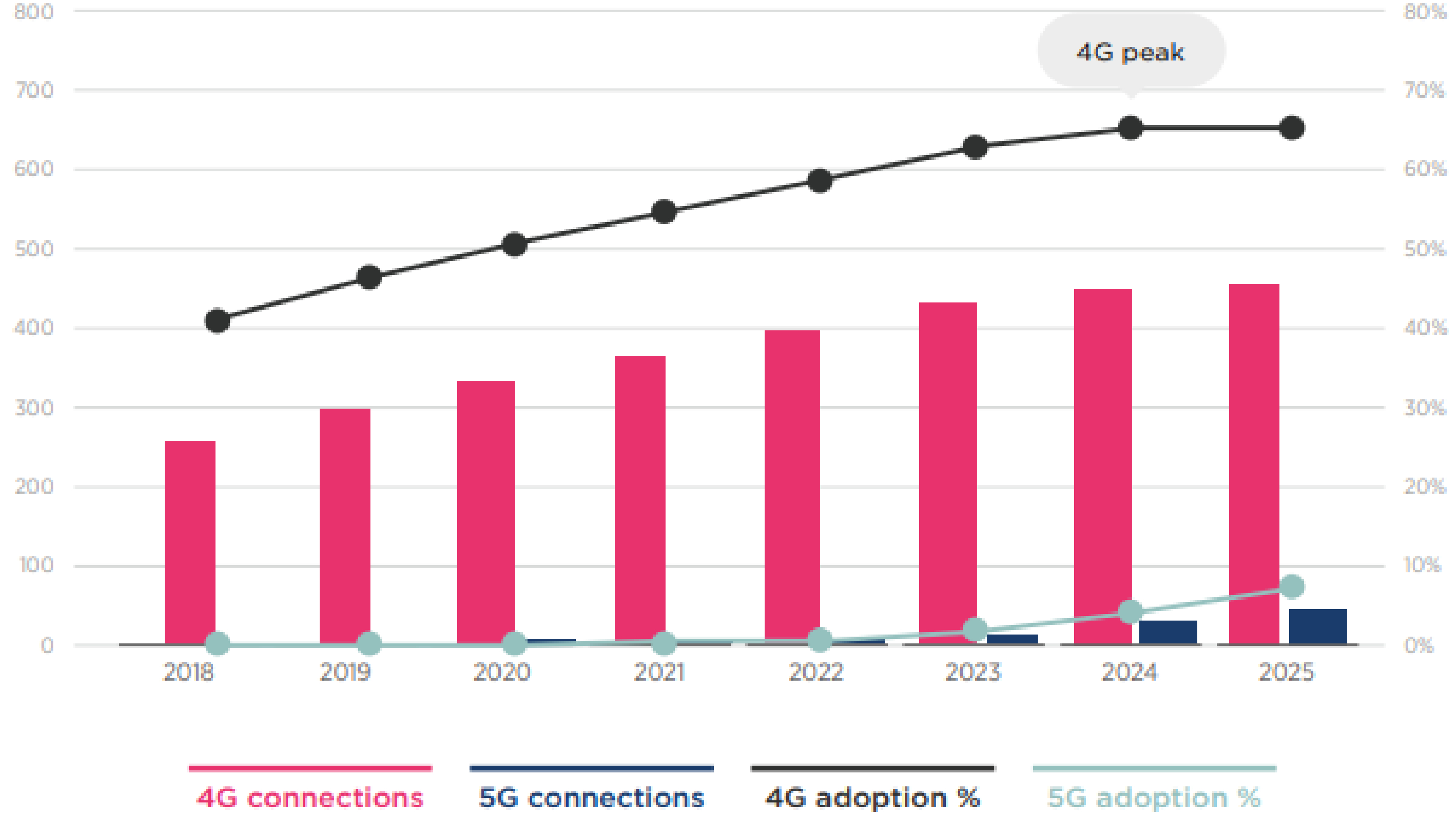
ICT imports by country of origin





SOURCE: Boletín Sociedad Digital 2 semester 2019 (published July 2020 by MINTIC) Datos de DIAN, 31 de diciembre de 2019. Cálculos propios.

Projections of mobile internet connections in Latin America according to technology



SOURCE: GSMA 2019

5G DEVELOPMENTS IN COLOMBIA

- According to CAF, there is insufficient deployment of the 4G network in the Latin American región; penetration of this technology reaches only half of the population and the geographical gap of mobile connectivity within the countries continues to be wide. Therefore government efforts have focused on the implementation of strategies to promote the implementation of and access to 4G technology.

- MinTIC published the 5G Plan in December 2019, which contemplates public policy guidelines and strategies in order to prepare the country for the deployment and massification of 5G technology. The document identifies challenges, strategies and action lines in matters of radio spectrum, 5G pilots, the development of business models (applications and solutions) in 5G, digital security and regulatory barriers to the deployment of infrastructure

- With respect to the analysis of regulatory conditions to favor the adoption of 5G technology, the Colombian Regulator in its study "Regulatory conditions to favor the adoption of 5G technology in Colombia", no regulatory barriers were found for the expansion of advanced mobile networks such as 5G.

5G DEVELOPMENTS IN COLOMBIA

- Claro, Movistar, Tigo, EMCALI and ETB have already shown their interest in acquiring frequencies in the 3.5 GHz band (the bid is expected for Q3- 2021), which is the key to the implementation of 5G networks

- Directv, Ericsson, Gemtek and Qualcomm Technologies launched in September 2020 the first plan with 5G internet for homes in Colombia, which at first will only be available in selected places in Bogotá.

- There are several companies authorized to implement 5G pilots:
  - Claro carried out a 5G pilot in the Plaza Claro Shopping Center in Bogotá, reaching speeds of up to 864Mbps (Download) and 103 Mbps (Upload).
  - Movistar is implementing a pilot with the Health Secretariat of Bogotá.
  - Other companies authorized are: Empresa de Telecomunicaciones de Bogotá S.A. E.S.P.; Colombia Telecomunicaciones S.A. E.S.P; Comunicación Celular S.A; Xiro Investment Group SAS, y ITICS S.A.S.

PUBLIC POLICY AND REGULATION

Regulatory framework

Over the last decade, digitalization policies in Colombia have been organized around the following components:

- The ICT Law issued in 2009, which established the Information Technologies and Communications Fund (Fondo para las Tecnologías de Información y las Comunicaciones) “to finance plans, programs and projects to primarily facilitate universal access and universal service” (Law 1341 of 2009).

- Three PNDs (National Development Plans) issued in 2010-14, 2014-18 and 2018-22. The PND is the formal and legal instrument that establishes the objectives of government, setting programmes, investments and goals for a four-year period.

- The ICT strategic sectoral plans set by the Ministry of Information and Communication Technologies (Ministerio de Tecnologías de la Información y Comunicaciones [MinTIC]): Live Digital (Vive Digital) (2010-14); its follow-up Live Digital for the People (Vive Digital para la Gente) (2014-18); and the newly launched The Digital Future is for All (El Futuro Digital es de Todos) (2018-22).

- The ICT Modernization Law (Law 1878 of 2019) which included one is the creation of a converged regulator.

Regulatory framework

There are 5 positive measures of the ICT Modernization Law (Ley 1978 de 2019) that should be highlighted:

1. The creation of a converged regulator (although with important reservations highlighted later in the section).
2. The reference to equal opportunities for all telecom providers regarding spectrum access
3. The guarantee of efficient use of the spectrum to respect investment, maximize social welfare and set the right investment conditions. Before, spectrum auctions maximized public revenues from the auctions.
4. The extension of the spectrum license period to 20 years.
5. The new purpose of the Information Technologies and Communications Fund (Fondo para las Tecnologías de Información y las Comunicaciones [FONTIC]), which is subject to periodic studies to determine its efficiency, effectiveness or impact on the use of the resources allocated in each project.

Regulatory framework

The PND 2018-2022 puts forward a Pact for the Digital Transformation of Colombia (Pacto por la Transformación Digital de Colombia) (DNP, 2018) with four main objectives:

1. promote the digital transformation of society and close the digital divide among individuals, businesses and territories

2. foster productivity in the government and in businesses through advanced digital technologies, e.g. big data, AI and the Internet of Things

3. foster investment and skills development for Industry 4.0

4. promote entrepreneurship, particularly for technology-based start-ups and in creative industries.

Colombia connects: Broadband deployment and digital inclusion for all Colombians	Towards a digital society and Industry 4.0: A more efficient, effective and transparent relationship among markets, citizens and the government
70% of households connected to the Internet, up from 50% in 2017	290 million digital transactions, up from 87 million in 2017
50% of households have fixed Internet, up from 38% in 2017	34 high-impact government services made available on line
80% of five-year olds and above use the Internet, up from 62% in 2017	3.5 million unique users of Servicios Ciudadanos Digitales
32 million Internet connections with more than 10 Mbps download, up from 15 million in 2017	90% of national and regional governmental entities identify and assess digital security risks, up from 11% in 2017
27 million 4G mobile Internet subscriptions, up from 12 million in 2017	50% of national governmental entities with open data or open source initiatives, up from 9% in 2017
3.57 million training courses on digital skills, up from 2.39 million in 2017	30% governmental entities use the Digital Government infrastructure, up from 18% in 2017

Source: DNP (2018), *Plan Nacional de Desarrollo 2018-2022 "Pacto por Colombia, Pacto por la Equidad"*.

Regulatory framework

The ICT strategic sectoral plan *El Futuro Digital es de Todos* articulates the PND around five axes (MinTIC, 2019):

● Effective use of ICTs by citizens. Citizens will trust, use and benefit from ICTs.
● Modernization of the ICT sector. The legal and regulatory framework of the ICT sector will be updated to transform it into a modern, dynamic sector and an engine of inclusive growth.
● ICT-driven economy. The Colombian economy will be driven by a creative, innovative, entrepreneurial and export-oriented ICT sector that will become a regional leader.
● High-quality connectivity for all. Colombia will be connected to high-speed, with high-quality services at a fair price, thus closing the digital divide.
● Digitalization of the public administration procedures and services. Colombia will achieve digitalization of all public administration processes at the national level and of 50% at the regional level, thus becoming a regional leader in digital government.

Regulatory framework

In addition, the following public policy documents (CONPES Documents) have been issued.

An eCommerce CONPES draft is currently open for comment.

Documento CONPES 3920

CONSEJO NACIONAL DE POLÍTICA ECONÓMICA Y SOCIAL
REPÚBLICA DE COLOMBIA
DEPARTAMENTO NACIONAL DE PLANEACIÓN

POLÍTICA NACIONAL DE EXPLOTACIÓN DE DATOS
(BIG DATA)

Documento CONPES 3995

CONSEJO NACIONAL DE POLÍTICA ECONÓMICA Y SOCIAL
REPÚBLICA DE COLOMBIA
DEPARTAMENTO NACIONAL DE PLANEACIÓN

POLÍTICA NACIONAL DE CONFIANZA Y SEGURIDAD DIGITAL

Documento CONPES 3975

CONSEJO NACIONAL DE POLÍTICA ECONÓMICA Y SOCIAL
REPÚBLICA DE COLOMBIA
DEPARTAMENTO NACIONAL DE PLANEACIÓN

POLÍTICA NACIONAL PARA LA TRANSFORMACIÓN DIGITAL E INTELIGENCIA ARTIFICIAL

Current goals and projects at MINTIC

Main goals:

- 70% of households connected by 2022 (currently 53%)
- 80% of Internet users by 2022
- To foster digital entrepreneurship and digital transformation

Spectrum in bands of 700, 1900, and 2500 Mhz was auctioned (5 billion pesos).

Main current projects:

- “Rural digital Zones”: to connect 1550 zones for 2 years, to serve more than 800 thousand people. Cost: 60.000 million pesos.
- “Connected Households”: to connect 500 thousand households of 1 and 2 strata (already 100,000 households connected throughout the country)
- “10K Program”: 10 thousand connected schools and their surroundings for 10 years: it is launched soon to tender (Cost: 2 billion pesos).
- 100 thousand trained developers.
- Temporary permits for 5G pilots
- Work at Home projects
- E-health Project

Key E-GOV Initiatives for implementation

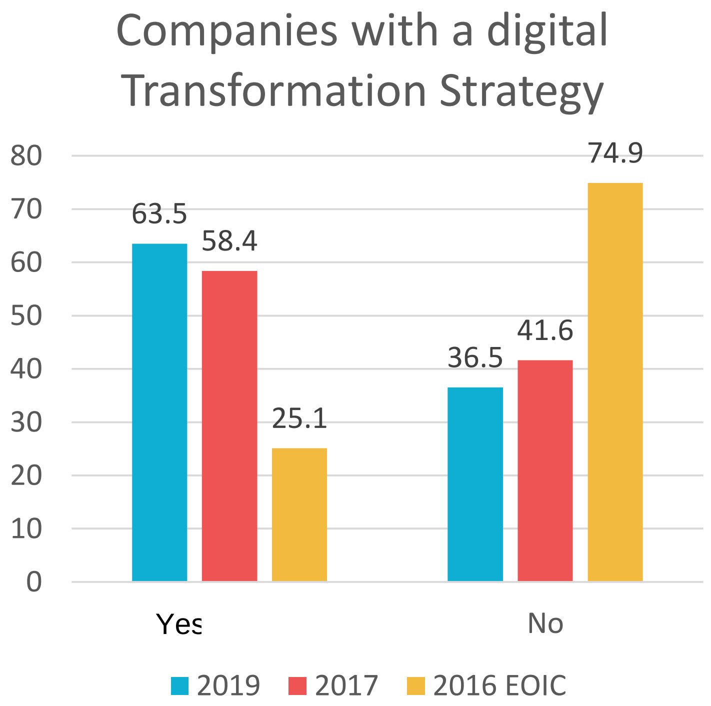
- Modernization of DIAN
- Runt tender
- Digital tolls
- Digital transformation of ICFES and ICETEX
- Electronic digital file of the justice sector
- Implementation of digital citizen services, such as the citizen folder
- Automation of the ICA already has the digitization of two procedures, and resources will be injected for the 60 missing
- Automation of Invima
- Oil information bank
- Digital social registry (DPS - DNP)
- Gov.co portal
- Procedures Migrant digital registry Multipurpose cadastre the credit for 120 million dollars has already been closed and implementation has already begun.
- Interoperable medical history
- Single window of paperwork in the environment sector
- Crystal Urn (the participation and open government platform).
- Regulatory Sandbox (Fintech)
- Regulatory Sandbox (Communications)
- Public Software (open source public software)

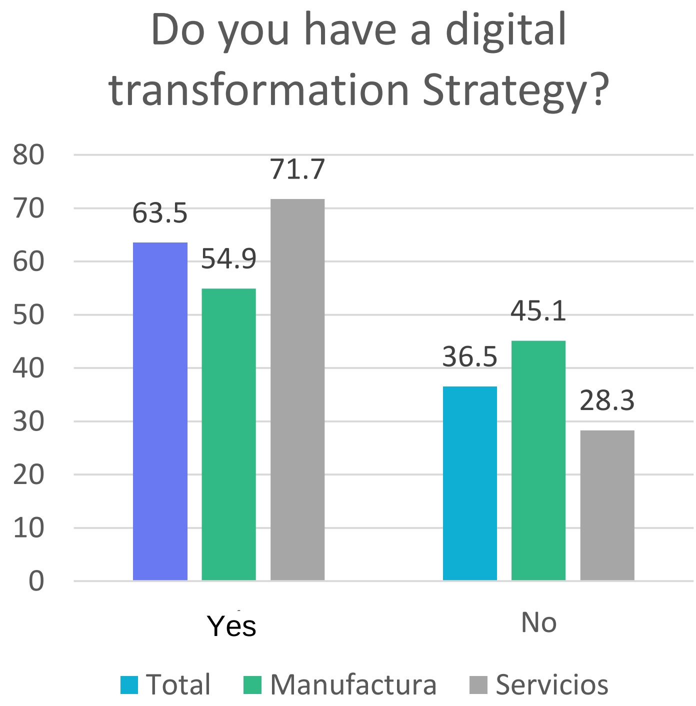
Current regulatory debates

As a result of the Commission for Communications Regulation's (Comisión de Regulación de Comunicaciones [CRC]) review of the Colombian mobile market, the regulator issued Resolution 5108 of 2017, where a new relevant market called "mobile services" was defined, covering the simultaneous purchase of voice and mobile data services. The CRC established that *ex ante* regulation might be applied for this market because some of the existing competition problems may transition from the "mobile voice" market to the "mobile services" market. The regulator opened an investigation to determine whether or not Comcel has a dominant position in the "mobile services" market and whether or not competition problems transition from the "mobile voice" market to the "mobile services" market. Finally, the CRC did not take any decision as the ICT Modernisation Law has suspended this proceeding until the appointment of at least three commissioners of the newly created converged regulator

Digital transformation in private sector

ANDI: Survey of Digital Transformation 2019

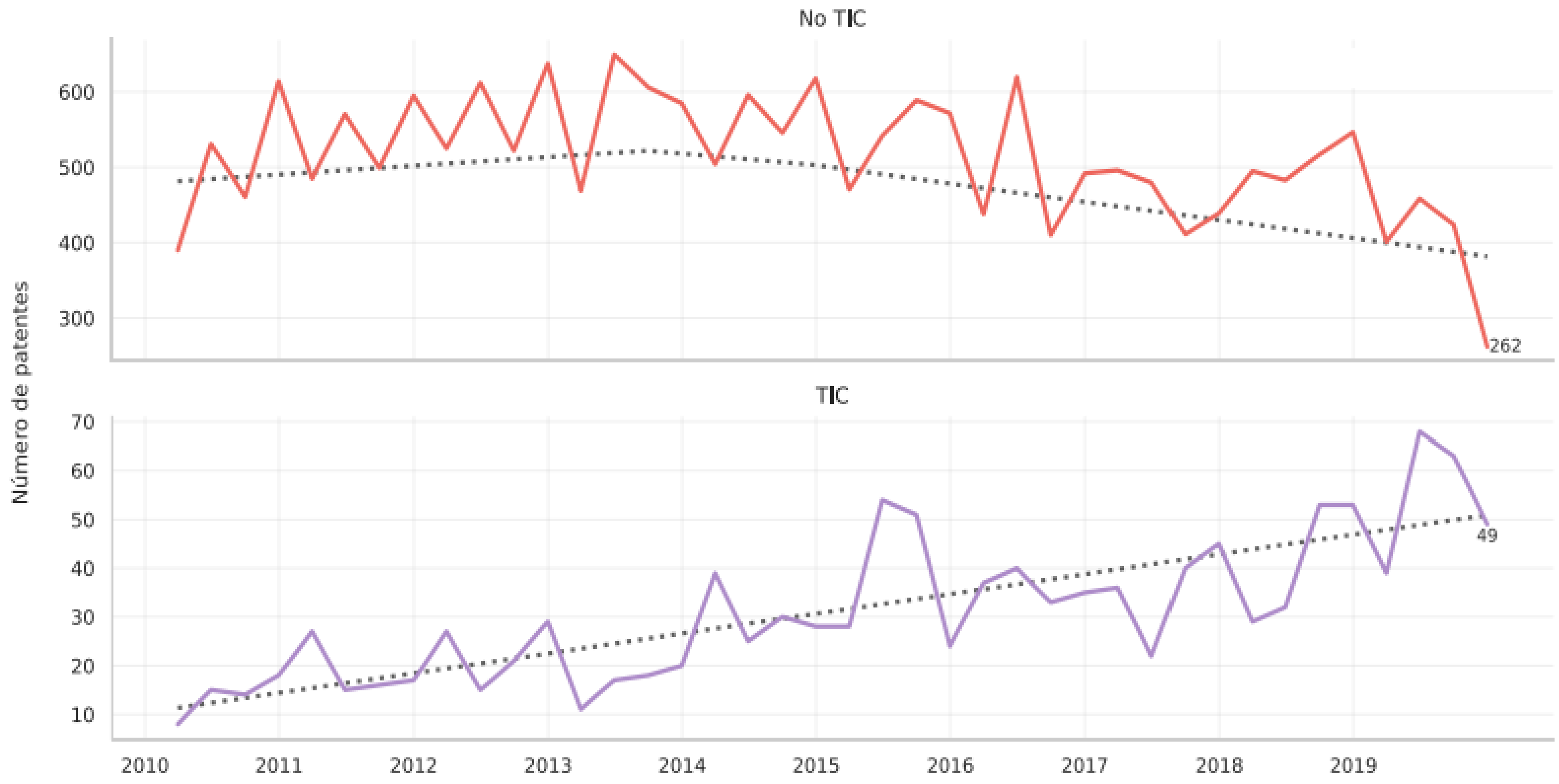




Fuente: ANDI – Encuesta de transformación digital 2019

Innovation in the ICT sector

Number of Patents 2010-2019



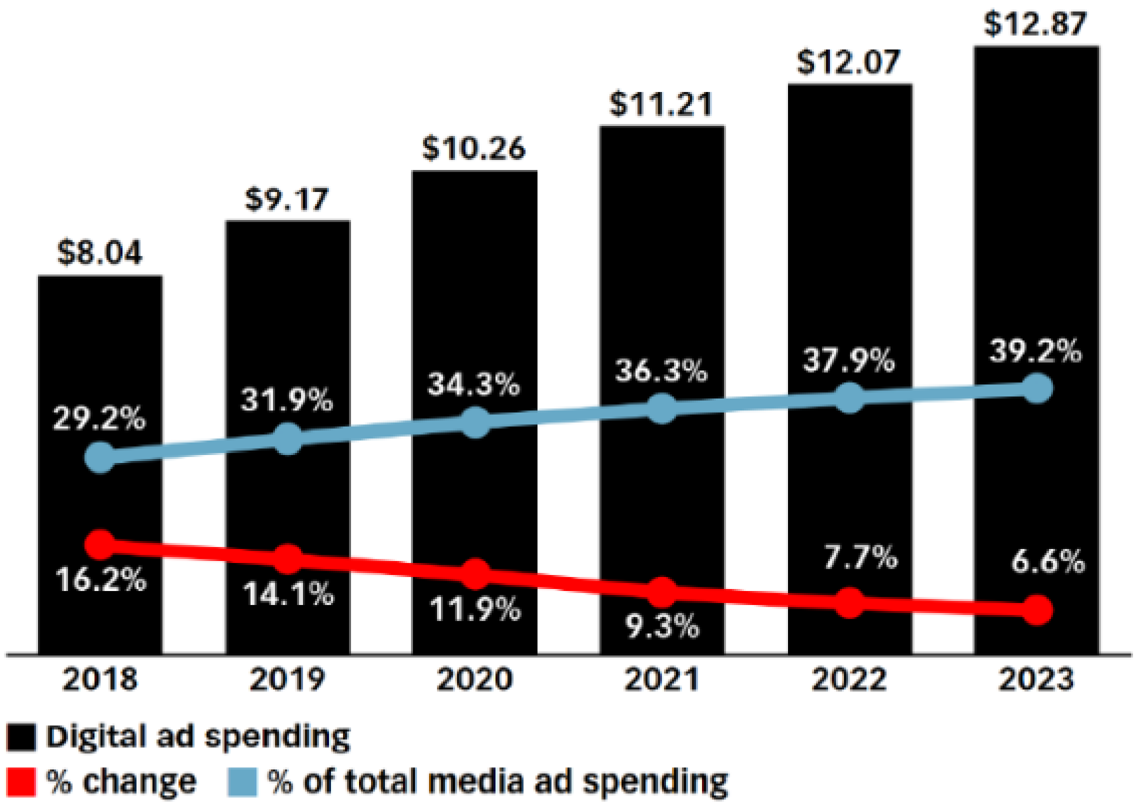
Fuente: SIPI, SIC, febrero de 2020. Cálculos propios

DIGITAL ADVERTISING

Digital ad spending in Latin America 2018-2023

Digital Ad Spending in Latin America, 2018 - 2023

Billions, % change and % of total media ad spending



Note: includes advertising that appears on desktop and laptop computers as well as mobile phones, tablets and other internet-connected devices, and includes all the various formats of advertising on those platforms; excludes SMS, MMS and P2P messaging-based advertising
Source: eMarketer, February 2019

T10015 www.eMarketer.com

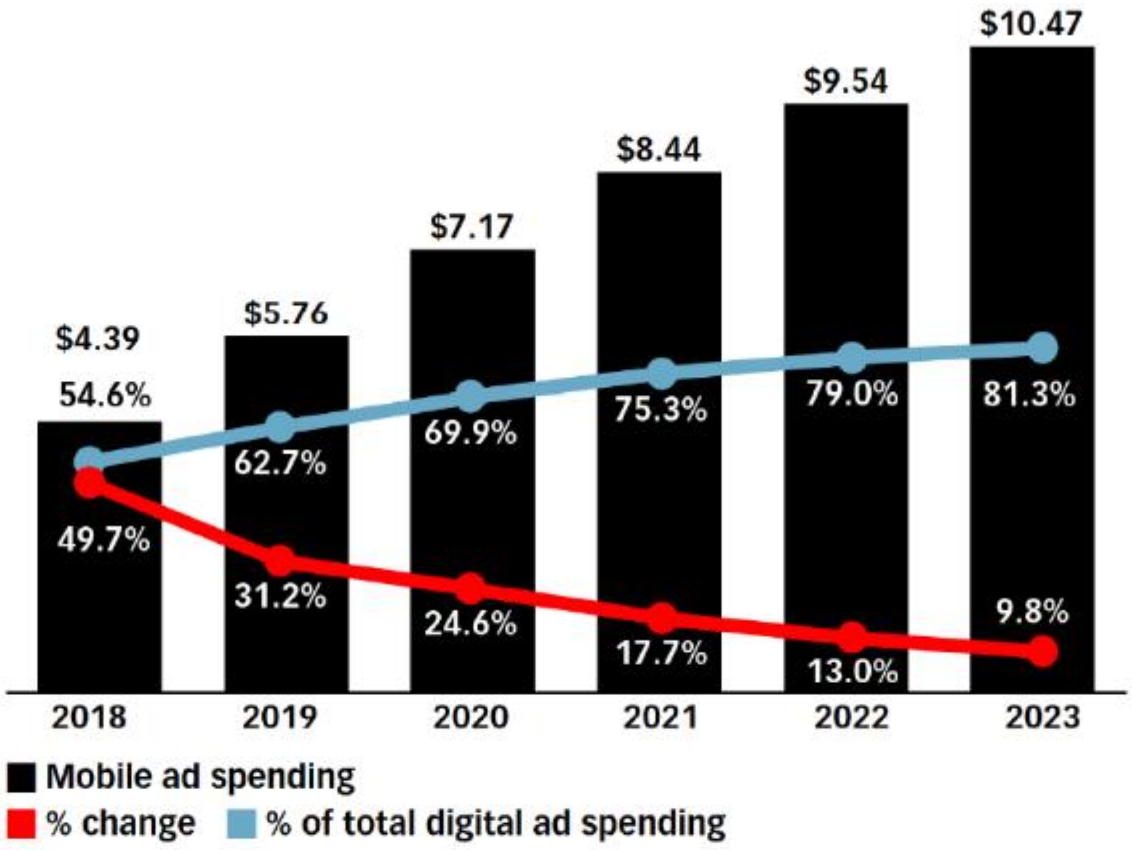
SOURCE: EMARKETER 2020

Digital ad spending in Latin America 2018-2023

Mobile Ad Spending in Latin America, 2018 - 2023

Billions, % change and % of total media ad spending

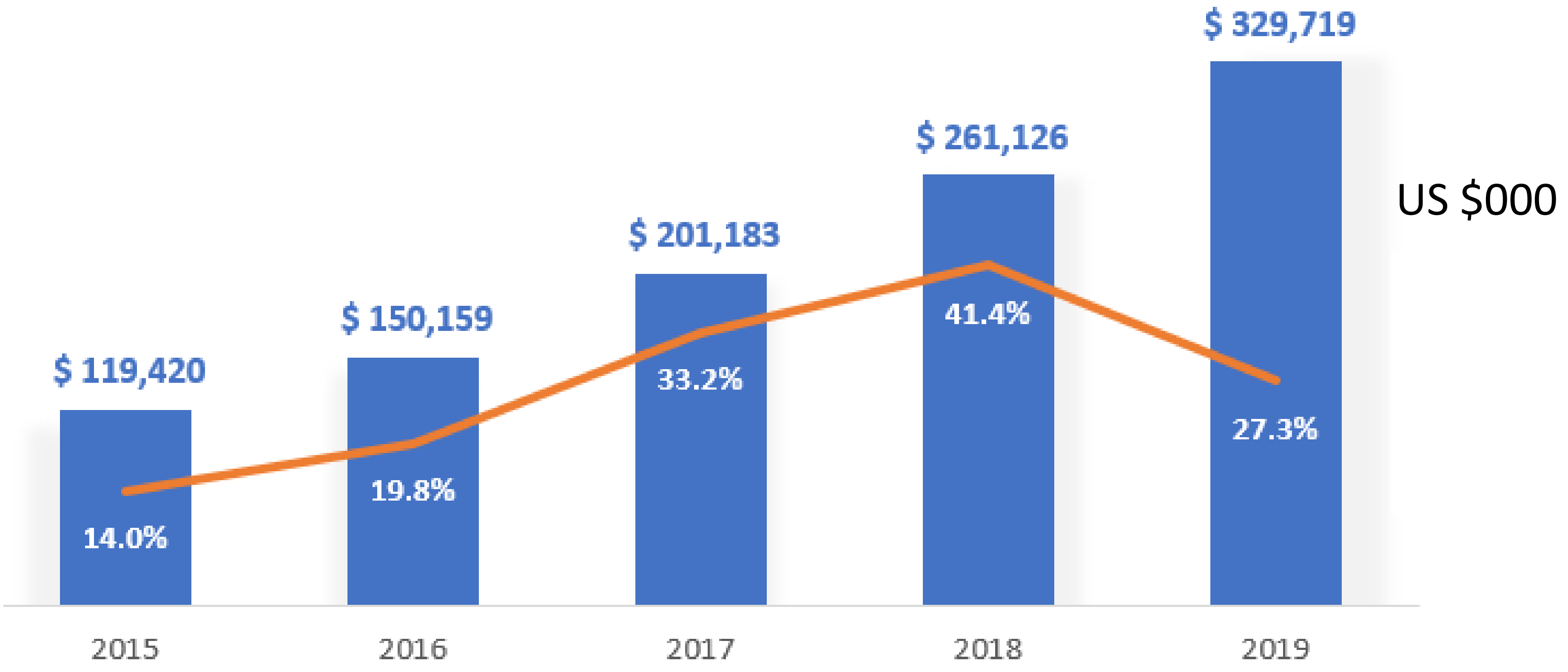
Mobile is the key to growth



Note: includes display (banners, rich media and video), search, classifieds and email; includes ad spending on tablets; excludes SMS, MMS and P2P messaging-based advertising
Source: eMarketer, February 2019

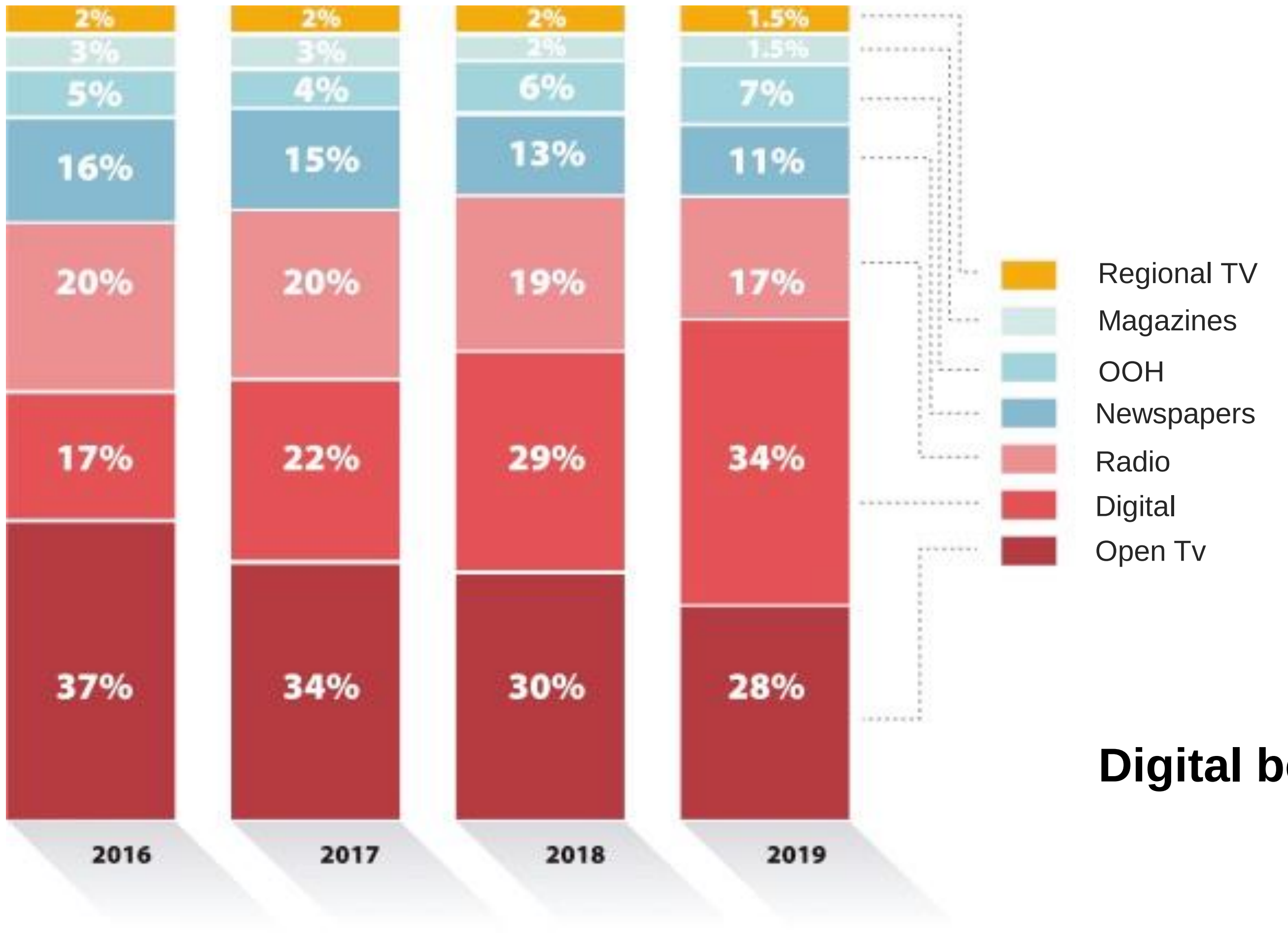
SOURCE: EMARKETER 2020

Digital Ad revenues 2015 - 2019



Source: IAB Colombia

Advertising share: 2019 figures



Digital became No 1

Source: IAB Colombia

Advertising share: 2019 figures

Traditional Media Users in Colombia, Q1 2019
% of internet users, by demographic

	Magazine readers	Newspaper readers	Radio listeners	TV viewers
Gender				
Female	63.3%	69.0%	81.5%	94.0%
Male	72.0%	71.2%	83.9%	92.4%
Age				
16-24	60.5%	59.4%	76.5%	92.0%
25-34	68.1%	72.9%	83.6%	94.1%
35-44	71.6%	75.2%	88.3%	92.8%
45-54	75.8%	75.8%	86.6%	93.1%
55-64*	-	-	-	-
Annual household income group				
Top 25%	69.9%	70.4%	83.8%	92.6%
Mid 50%	71.5%	74.2%	84.7%	93.2%
Bottom 25%	62.6%	68.7%	80.2%	91.3%
Household location				
Urban	68.1%	70.6%	83.0%	93.3%
Suburban*	-	-	-	-
Rural*	-	-	-	-
Total	**67.6%**	**70.1%**	**82.6%**	**93.2%**

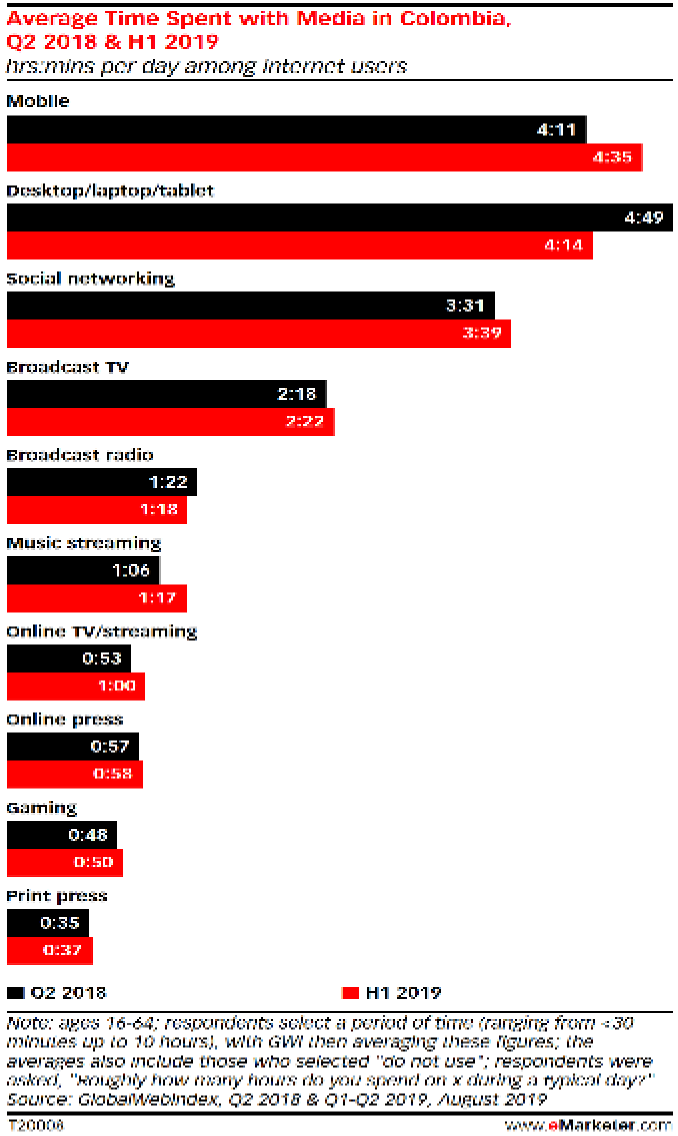
*Note: combined responses for used in the past 7 days and past 30 days; respondents were asked, "When was the last time you did each of the following things?"; *omitted due to small sample size*
Source: GlobalWebIndex/Publicis Media, August 2019

T201412 www.eMarketer.com

Magazines, newspapers and radio are more popular among older people

Source: emarketer

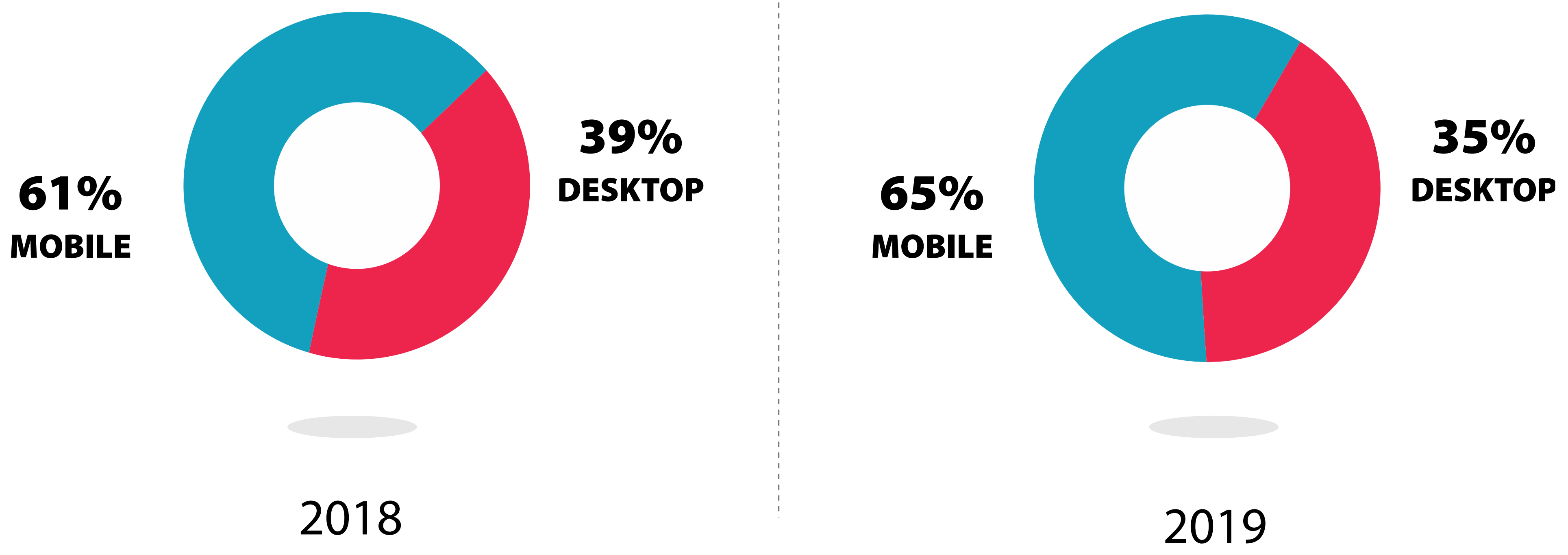
Advertising share: 2019 figures



Mobile surpassed desktop time spent and became by far the most important device for internet users.

Source: emarketer

Digital Advertising revenues by device



Source: IAB Colombia

Advertising share: 2019 figures

Device Ownership in Colombia, Q2 2018 & H1 2019
% of internet users

	Q2 2018	H1 2019
Smartphone	95.8%	97.2%
Desktop/laptop	85.2%	78.6%
Smart TV	50.6%	55.8%
Tablet	43.2%	39.5%
Game console	31.0%	28.9%
Feature phone	15.5%	14.4%
TV streaming stick/device	12.0%	11.4%
Smartwatch	7.4%	9.7%
Smart-home device*	-	9.4%
Smart wristband	3.2%	4.9%
VR headset/device	3.4%	3.4%

*Note: ages 16-64; respondents were asked, "Which of the following devices do you own?"; *2018 data unavailable*
Source: GlobalWebIndex, Q2 2018 & Q1-Q2 2019, August 2019

T20057 www.eMarketer.com

Smart Tv is becoming very popular among Colombians. It is expected to be a big opportunity for CTV advertising in the near future

Source: emarketer

Advertising share: 2019 figures

Video-on-Demand (VOD) Viewers in Colombia, Q2 2018 & H1 2019
% of internet users, by demographic

	Q2 2018	H1 2019
Gender		
Female	87.0%	91.3%
Male	91.8%	91.3%
Age		
16-24	93.0%	93.3%
25-34	90.9%	93.1%
35-44	85.0%	88.6%
45-54	83.4%	86.9%
55-64*	-	-
Annual household income group		
Top 25%	96.6%	95.0%
Mid 50%	90.3%	92.1%
Bottom 25%	82.2%	91.3%
Household location		
Urban	89.0%	91.7%
Suburban*	-	-
Rural*	-	-
Total	**89.4%**	**91.3%**

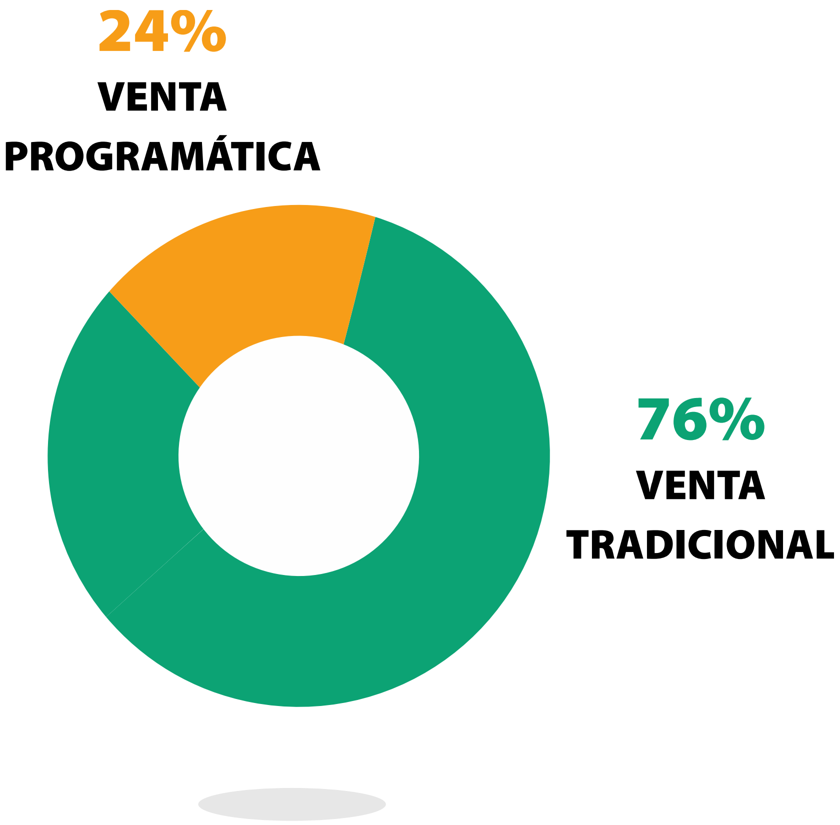
*Note: used at least one service in the past month via any device; services include Amazon Prime Video, Blim, Claro Video, Crackle, Dazn, Google Play, HBO Go, iTunes, MUBI, Netflix, Studio+ and/or Vimeo; respondents were asked, "In the last month, which of these services have you used to watch/download TV shows, films or videos? Please think about any sort of TV, video or film content that you have watched, streamed, downloaded or accessed in any other way."; *omitted due to small sample size*
Source: GlobalWebIndex, Q2 2018 & Q1-Q2 2019, August 2019

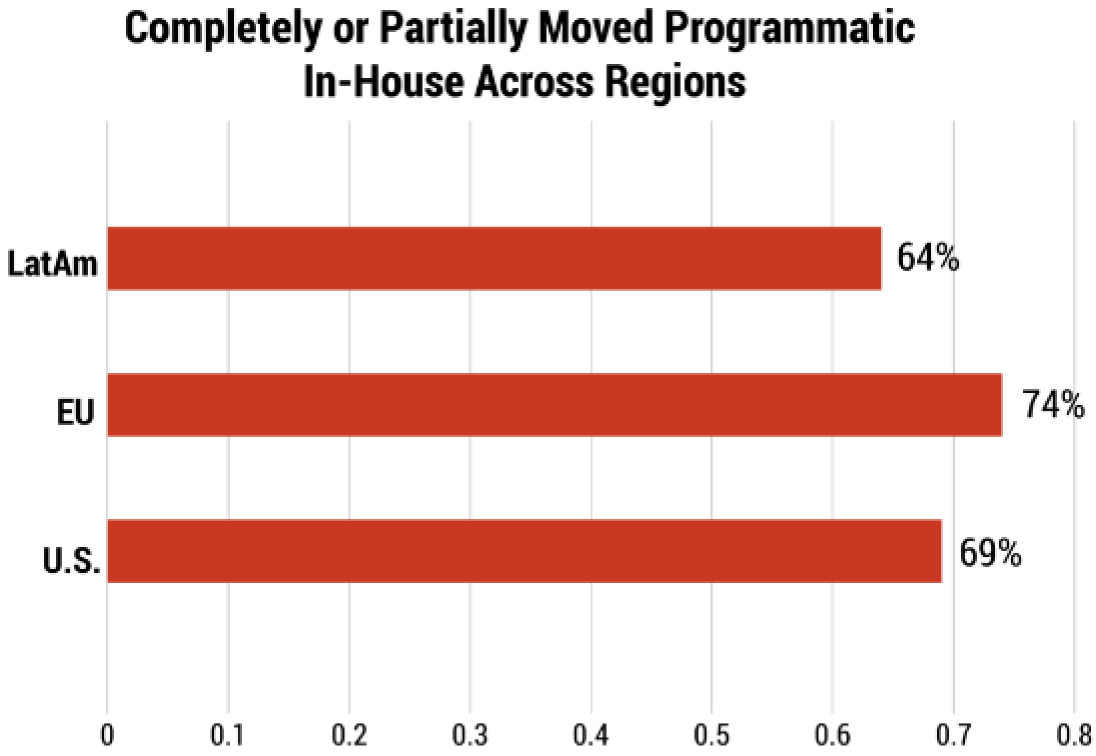
T20138 www.eMarketer.com

VOD platforms are becoming very relevant among Colombians. Netflix, Disney + , Pluto TV among the most important ones.

Source: emarketer

Share of digital investment 2019 by type of media





Source: IAB Colombia

SOCIAL
MEDIA

Social Media Landscape

Total number of active social media users

35.00
MILLON

Social media users compared to total population

69%

Change in social media user numbers (apr 2019 to jan 2020)

+11%
+3.4 MILLION

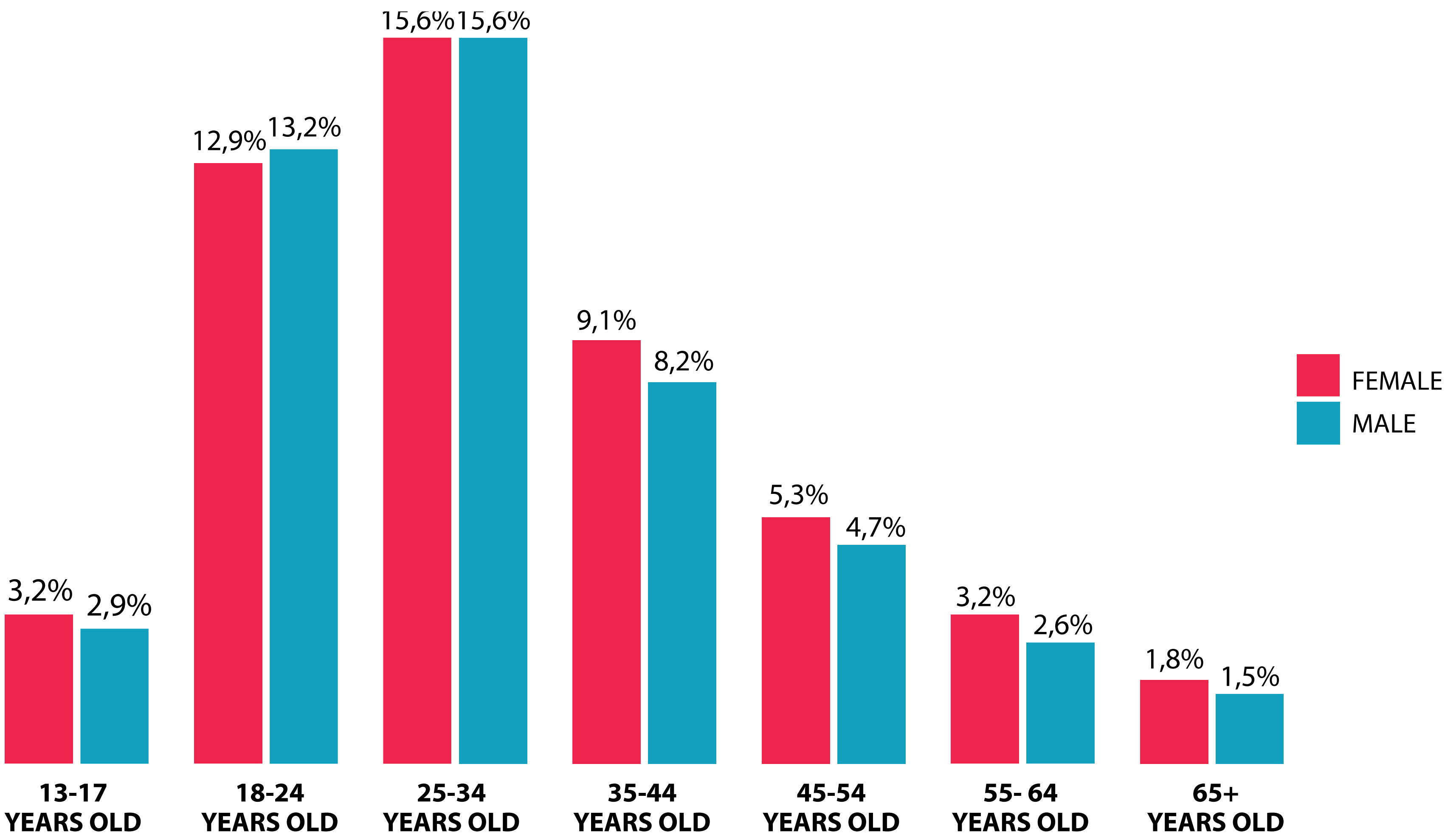
Percentage of active social media users accessign via mobile

98%

SOURCES: BASED ON DATA PUBLISHED IN SELECTED SOCIAL MEDIA PLATFORMS

Social media advertising audience profile

Share of the total advertising audience across Facebook, Instagram and FB message by age and gender



SOURCE: EXTRAPOLATIONS OF DATA FROM FACEBOOK'S SELF-SERVICE ADVERTISING TOOLS (JANUARY 2020). BASED ON ACTIVE USERS OF FACEBOOK, INSTAGRAM, AND / OR FACEBOOK MESSENGER. *NOTES: FACEBOOK'S TOOLS DO NOT PUBLISH AUDIENCE DATA FOR GENDERS OTHER THAN 'MALE' OR 'FEMALE'. *ADVISORY: DATA ON THIS CHART REPRESENT THE SOCIAL MEDIA ADVERTISING AUDIENCE ONLY, AND MAY NOT CORRELATE TO RESPECTIVE SHARES OF TOTAL MONTHLY ACTIVE SOCIAL MEDIA USERS. ▯ COMPARABILITY ADVISORY: BASE CHANGES.

Social media behaviours

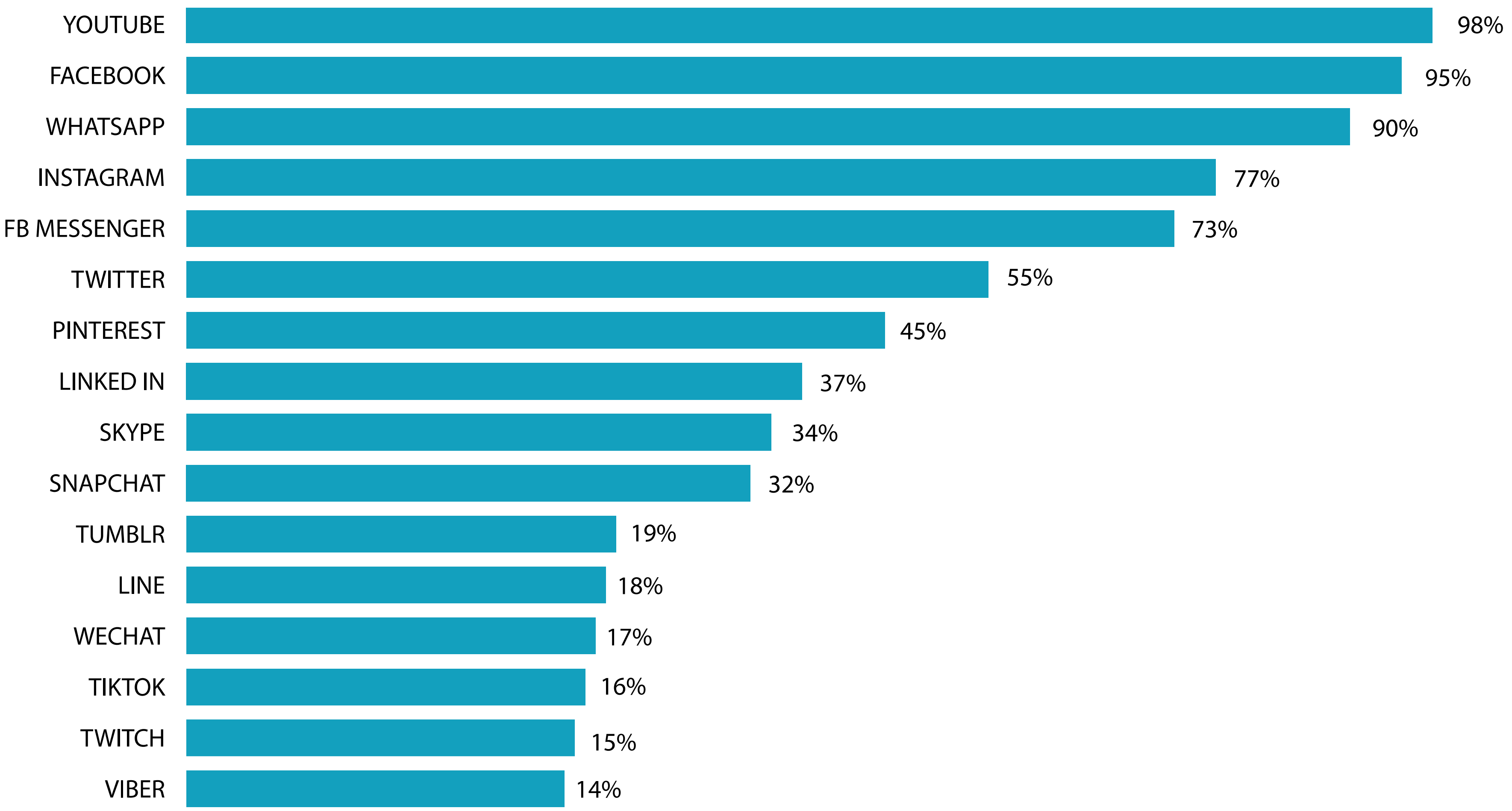
Details of how **internet users aged 16 to 64** engage with social media

Visited or used a social networks or messaging service the past month	Actively engaged with or contributed to social media in the past month	Average mount of time per day spent using social media	Average number of social media accounts per internet user	Percentage of internet users who use social media for work purposes
100%	**90%**	**3H 45M**	**9.6**	**63%**

SOURCE: GLOBALWEBINDEX (Q3 2019). FIGURES REPRESENT THE FINDINGS OF A BROAD SURVEY OF INTERNET USERS AGED 16 TO 64. SEE GLOBALWEBINDEX.COM FOR MORE DETAILS. *NOTE: FIGURE FOR SOCIAL MEDIA ACCOUNTS MAY NOT INDICATE ACTIVE USE OF ALL ACCOUNTS EVERY MONTH. *ADVISORY: FIGURE FOR PERCENTAGE OF INTERNET USERS WHO VISITED OR USED A SOCIAL PLATFORM IN THE PAST MONTH MAY NOT CORRELATE TO TOTAL NUMBER OF SOCIAL MEDIA USERS DUE TO DIFFERENT REPORTING BASES AND METHODOLOGIES.

Most-used social media platforms

Percentage of internet aged 16 to 64 who report using platform in the past month



GLOBALWEBINDEX (Q3 2019). FIGURES REPRESENT THE FINDINGS OF A BROAD SURVEY OF INTERNET USERS AGED 16 TO 64. SEE GLOBALWEBINDEX.COM FOR MORE DETAILS. NOTE: FIGURES ARE BASED ON INTERNET USERS' SELF-REPORTED BEHAVIOUR, AND MAY NOT MATCH THE MONTHLY ACTIVE USER FIGURES OR ADDRESSABLE ADVERTISING AUDIENCE REACH FIGURES FOR EACH PLATFORM THAT WE PUBLISH ELSEWHERE IN THIS REPORT.

Social media platforms by age and gender

Social Media Users in Colombia, Q2 2018 & H1 2019
% of internet users, by demographic

	Q2 2018	H1 2019
Gender		
Female	86.8%	91.4%
Male	86.9%	89.5%
Age		
16-24	88.2%	90.2%
25-34	85.7%	89.7%
35-44	86.6%	90.8%
45-54	88.4%	92.7%
55-64*	-	-
Annual household income group		
Top 25%	87.7%	90.7%
Mid 50%	87.1%	90.5%
Bottom 25%	87.5%	92.4%
Household location		
Urban	87.3%	90.9%
Suburban*	-	-
Rural*	-	-
Total	**86.9%**	**90.5%**

*Note: actively engaged with or contributed to at least one service in the past month via any device; services include Badoo, Facebook, Facebook Messenger, Instagram, Line, LinkedIn, Pinterest, reddit, Sina Weibo, Skype, Slack, Snapchat, Tencent Weibo, Twitch, Twitter, WeChat, WhatsApp, YouTube and/or other; respondents were asked, "Which (of the following services) have you actively engaged with or contributed to in the past month via any device?"; *omitted due to small sample size*
Source: GlobalWebIndex, Q2 2018 & Q1-Q2 2019, August 2019

T20136 www.eMarketer.com

Social media continues to grow among all ages and both genders despite its large penetration

Source: emarketer.

Facebook audience overview

The potential number people that marketers can reach using adverts on Facebook

32.00 MILLION

Number of people that facebook reports can be reached with adverts on facebook

78%

Facebook's reported advertising reach compared to total population aged 13+

0% UNCHANGED

Quarter-on-quarter change in facebook's advertising reach

51.5%

Percentage of its ad audience that facebook reports is female

48.5%

Percentage of its ad audience that facebook reports is male

SOURCES: FACEBOOK'S SELF-SERVICE ADVERTISING TOOLS (ACCESSED JANUARY 2020); POPULATION DATA FROM THE U.N. NOTE: FACEBOOK DOES NOT PUBLISH ADVERTISING AUDIENCE DATA FOR GENDERS OTHER THAN 'MALE' AND 'FEMALE'. ADVISORY: FIGURES REPORTED ON THIS CHART ARE BASED ON FACEBOOK'S ADDRESSABLE ADVERTISING AUDIENCE, AND MAY NOT MATCH TOTAL ACTIVE USERS. □ COMPARABILITY ADVISORY: BASE CHANGES. DATA MAY NOT BE COMPARABLE TO FIGURES PUBLISHED IN PREVIOUS REPORTS.

Facebook acces by device

The devices that Facebook users use to access the platform

97.8%

Percentage of facebook users accesing via any kind of mobile phone

19.1%

Percentage of facebook users who access via both phones and computers

2.2%

Percentage of facebook users who only access via a laptop or desktop computer

78.7%

Percentage of facebook users who only access via a mobile phone

SOURCE: EXTRAPOLATIONS OF DATA FROM FACEBOOK'S SELF-SERVICE ADVERTISING TOOLS (JANUARY 2020). BASED ON FACEBOOK USERS AGED 18 AND ABOVE.

Facebook activity frecuency

How often a “Typical” user perform each activity on Facebook

1 **FEMALE: 1** **MALE: 1**

Number of facebook pages liked (lifetime)

5 **FEMALE: 7** **MALE: 4**

Comments made in the past 30 days (all post types)

2 **FEMALE: 3** **MALE: 2**

Facebook post shared in the past 30 days (all post types)

15 **FEMALE: 19** **MALE: 12**

Post liked in the past 30 days (all post types)

12 **FEMALE: 14** **MALE: 10**

Facebook adverts clicked in the past 30 days (any click type)

SOURCE: FACEBOOK (JANUARY 2020). *NOTE: FIGURES REPRESENT MEDIAN VALUES FOR ACTIVE FACEBOOK USERS AGED 18 AND ABOVE. FIGURE FOR THE NUMBER OF FACEBOOK PAGES LIKED IS THE MEDIAN NUMBER OF PAGES THAT THE TYPICAL FACEBOOK USER HAS ‘LIKED’ IN ALL THE TIME THEY HAVE BEEN USING FACEBOOK, NOT JUST IN THE PAST MONTH. FOR REFERENCE, THE WORLDWIDE MEDIAN IS JUST ONE PAGE.

Facebook page reach benchmarks

Average monthly growth in page likes (fans), average reach of page post, and the role of paid media

5.1%
Average organic reach vs. Page likes

+0.10%
Average monthly change in page likes

22.4%
Percentage of pages using paid media

3.7%
Average post reach vs. Page likes

31.9%
Average paid reach vs. Total reach

SOURCE: LOCOWISE (JANUARY 2020). FIGURES REPRESENT AVERAGES FOR Q4 2019. *ADVISORY: FIGURES REPRESENT AVERAGES FOR A BROAD RANGE OF DIFFERENT PAGES AND PAGE TYPES, AND PAGES WITH A GREATER NUMBER OF "PAGE LIKES" WILL TYPICALLY EXPERIENCE SIGNIFICANTLY LOWER LEVELS OF ORGANIC REACH COMPARED TO THE AVERAGES QUOTED HERE.

Facebook page reach benchmarks

Average number of people who engage with Facebook page post compared to post reach

2.26%

Average engagement rate for facebook page post of any kind

2.60%

Average engagement rate for facebook page image posts

0.50%

Average engagement rate for facebook page page status posts

3.19%

Average engagement rate for facebook page page video posts

1.41%

Average engagement rate for facebook page page link posts

SOURCE: LOCOWISE (JANUARY 2020). FIGURES REPRESENT AVERAGES FOR Q4 2019. *ADVISORY: FIGURES REPRESENT AVERAGES FOR A BROAD RANGE OF DIFFERENT PAGES AND PAGE TYPES, AND PAGES WITH A GREATER NUMBER OF "PAGE LIKES" WILL TYPICALLY EXPERIENCE SIGNIFICANTLY LOWER LEVELS OF ENGAGEMENT COMPARED TO THE AVERAGES QUOTED HERE.

Instagram audience overview

The potential number people that marketers can reach using adverts on Instagram

12.00 MILLION

Number of people that instagram reports can be reached with adverts on instagram

+6.2%

Quarter-on-quarter change in instagram's advertising reach

29%

Instagram's reported advertising reach compared to total population aged 13+

56.4%

Percentage of its ad audience that instagram reports is female

43.6%

Percentage of its ad audience that instagram reports is male

SOURCE: FACEBOOK'S SELF-SERVICE ADVERTISING TOOLS FOR INSTAGRAM (ACCESSED JANUARY 2020); POPULATION DATA FROM THE U.N. NOTE: FACEBOOK'S TOOLS DO NOT PUBLISH ADVERTISING AUDIENCE DATA FOR GENDERS OTHER THAN 'MALE' AND 'FEMALE'. ADVISORY: FIGURES REPORTED ON THIS CHART ARE BASED ON INSTAGRAM'S ADDRESSABLE ADVERTISING AUDIENCE, AND MAY NOT MATCH TOTAL ACTIVE USERS. □ COMPARABILITY ADVISORY: BASE CHANGES. DATA MAY NOT BE COMPARABLE TO FIGURES PUBLISHED IN PREVIOUS REPORTS.

Snapchat audience overview

The potential number people that marketers can reach using adverts on Snapchat

4.50 MILLION

Number of people that snapchat reports can be reached with adverts on snapchat

11%

Snapchat's reported advertising reach compared to total population aged 13+

76.0%

Percentage of its ad audience that snapchat reports is female

22.0%

Percentage of its ad audience that snapchat reports is male

+15%

Quarter-on-quarter change in snapchat's advertising reach

SOURCE: EXTRAPOLATIONS OF DATA FROM SNAPCHAT'S SELF-SERVICE ADVERTISING TOOLS (JANUARY 2020). FIGURES BASED ON MID-POINTS OF PUBLISHED RANGES. POPULATION DATA FROM THE U.N. *NOTE: SNAPCHAT'S TOOLS DO NOT PUBLISH ADVERTISING AUDIENCE DATA FOR GENDERS OTHER THAN 'MALE' AND 'FEMALE', BUT THE DATA THAT THE PLATFORM REPORTS FOR MALE AND FEMALE AUDIENCES DO NOT SUM TO 100% OF THE TOTAL AUDIENCE FIGURE. GENDER SHARE FIGURES REFLECT A SHARE OF TOTAL AUDIENCE, SO WILL NOT SUM TO 100%.

Twitter audience overview

The potential number people that marketers can reach using adverts on Twitter

3.20 MILLION

Number of people that twiter reports can be reached with adverts on twitter

+1.6%

Quarter-on-quarter change in twitter's advertising reach

37.1%

Percentage of its ad audience that twitter reports is female

7.8%

Twitter's reported advertising reach compared to total population aged 13+

62.9%

Percentage of its ad audience that twitter reports is male

SOURCE: EXTRAPOLATIONS OF DATA FROM TWITTER'S SELF-SERVICE ADVERTISING TOOLS (JANUARY 2020). FIGURES BASED ON MID-POINTS OF PUBLISHED RANGES. POPULATION DATA FROM THE U.N. *NOTE: TWITTER DOES NOT PUBLISH ADVERTISING AUDIENCE DATA FOR GENDERS OTHER THAN 'MALE' AND 'FEMALE'. GENDER SHARE FIGURES BASED ON AVAILABLE DATA. ADVISORY: DATA REPORTED BY TWITTER'S SELF-SERVICE ADVERTISING TOOLS ARE SUBJECT TO SIGNIFICANT FLUCTUATION. □ COMPARABILITY ADVISORY: SIGNIFICANT BASE CHANGES.

Linkedin audience overview

The potential number people that marketers can reach using adverts on Linkedin

+1.3%

Quarter-on-quarter change in linkedin's advertising reach

21%

Linkedin's reported advertising reach compared to total population aged 13+

48.6%

Percentage of its ad audience that linkedin reports is female

7.80 MILLION

Number of people that linkedin reports can be reached with adverts on linkedin

51.4%

Percentage of its ad audience that linkedin reports is male

SOURCE: EXTRAPOLATIONS OF DATA FROM LINKEDIN'S SELF-SERVICE ADVERTISING TOOLS (JANUARY 2020). POPULATION DATA FROM THE U.N. *NOTES: LINKEDIN'S ADVERTISING AUDIENCE FIGURES ARE BASED ON TOTAL (REGISTERED) MEMBERS, NOT MONTHLY ACTIVE USERS, SO DATA ON THIS CHART MAY NOT BE COMPARABLE TO SIMILAR DATA POINTS FOR OTHER PLATFORMS. LINKEDIN DOES NOT REPORT ADVERTISING AUDIENCE FIGURES FOR GENDERS OTHER THAN 'MALE' OR 'FEMALE'. GENDER SHARE FIGURES HAVE BEEN EXTRAPOLATED FROM AVAILABLE DATA.

Share of web traffic by mobile os

Share of web page requests originating mobile handsets running different mobile operating systems

SHARE OF WEB TRAFFIC ORIGINATING FROM ANDROID DEVICES	SHARE OF WEB TRAFFIC ORIGINATING FROM APPLE DEVICES	SHARE OF WEB TRAFFIC ORIGINATING FROM KAI DEVICES	SHARE OF WEB TRAFFIC ORIGINATING FROM SAMSUNG DEVICES	SHARE OF WEB TRAFFIC ORIGINATING FROM OTHERS DEVICES
89.1%	**10.1%**	**N/A**	**0.5%**	**0.2%**
DEC 2019 VS. DEC 2018	DEC 2019 VS. DEC 2018	DEC 2019 VS. DEC 2018	DEC 2019 VS. DEC 2018	DEC 2019 VS. DEC 2018
+11%	**+3.0%**	**N/A**	**-51%**	**-97%**

SOURCE: STATCOUNTER (ACCESSED JANUARY 2020). FIGURES REPRESENT EACH OPERATING SYSTEM'S SHARE OF WEB PAGES SERVED TO WEB BROWSERS ONLY. SHARE FIGURES ARE FOR DECEMBER 2019; ANNUAL CHANGE FIGURES COMPARE MONTHLY SHARE VALUES FOR DECEMBER 2019 TO DECEMBER 2018. *NOTES: FIGURES FOR SAMSUNG OS REFER ONLY TO THOSE DEVICES RUNNING OPERATING SYSTEMS DEVELOPED BY SAMSUNG (E.G. BADA AND TIZEN), AND DO NOT INCLUDE SAMSUNG DEVICES RUNNING ANDROID.

Value of the digital advertising market

Total spend (in US dollars) in digital advertising in 2019, with detail of sped in individual sub-categories

Total digital ad spend in 2019

$951.0 MILLION

Spend on digital search ads in 2019

$315.0 MILLION

Spend on social media ads in 2019

$414.0 MILLION

Spend on digital banner ads in 2019

$105.0 MILLION

Spend on digital video ads in 2019

$60.00 MILLION

Spend on digital classified ads in 2019

$57.00 MILLION

SOURCE: STATISTA MARKET OUTLOOK FOR DIGITAL ADVERTISING (ACCESSED JANUARY 2020). FIGURES REPRESENT FULL-YEAR DIGITAL ADVERTISING SPEND FOR 2019. SEE STATISTA.COM/OUTLOOK/DIGITAL-MARKETS FOR MORE DETAILS. NOTES: SPEND VALUES ARE IN U.S. DOLLARS. INCLUDES ADVERTISING ON MOBILE AND DESKTOP DEVICES. VALUES DO NOT INCLUDE SPEND ON E-MAIL MARKETING, AUDIO ADVERTS, INFLUENCER MARKETING, SPONSORSHIPS, PRODUCT PLACEMENT, OR COMMISSION-BASED AFFILIATE SYSTEMS.

Digital advertising market: value growth

Year-on-year change in the value of the digital advertising market between 2018 and 2019

Year on year change in total digital ad spend

$951.0 MILLION

Year on year change in digital search ad spend

$315.0 MILLION

Year on year change in social media ad spend

$414.0 MILLION

Year on year change in digital banner ad spend

$105.0 MILLION

Year on year change in digital video ad spend

$60.00 MILLION

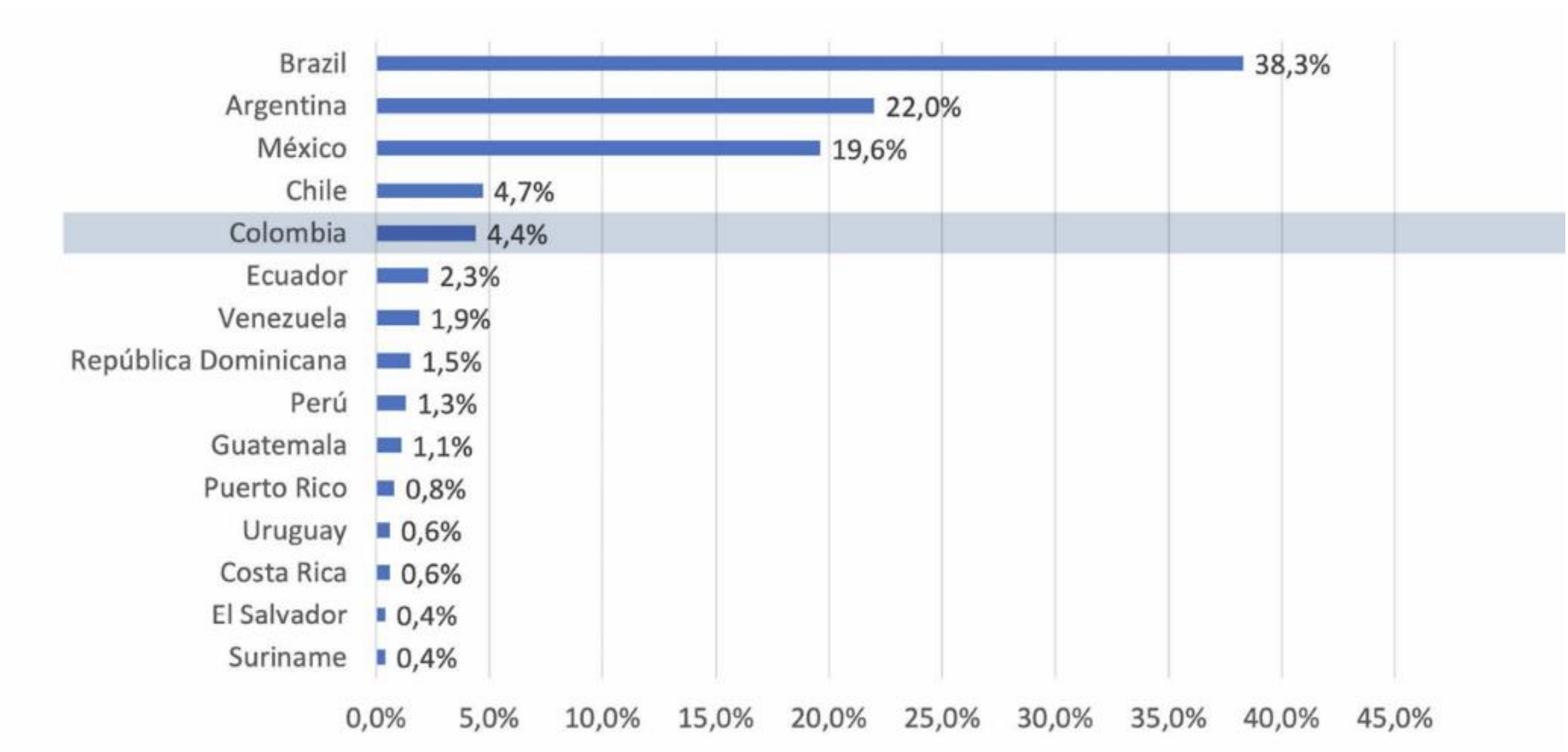
Year on year change in digital classified ad spend

$57.00 MILLION

SOURCE: STATISTA MARKET OUTLOOK FOR DIGITAL ADVERTISING (ACCESSED JANUARY 2020). FIGURES COMPARE FULL-YEAR DIGITAL ADVERTISING SPEND IN 2019 TO EQUIVALENT DATA FOR 2018. SEE STATISTA.COM/OUTLOOK/DIGITAL-MARKETS FOR MORE DETAILS. NOTES: INCLUDES ADVERTISING ON MOBILE AND DESKTOP DEVICES. VALUES DO NOT INCLUDE SPEND ON E-MAIL MARKETING, AUDIO ADVERTS, INFLUENCER MARKETING, SPONSORSHIPS, PRODUCT PLACEMENT, OR COMMISSION-BASED AFFILIATE SYSTEMS.

ECOMMERCE

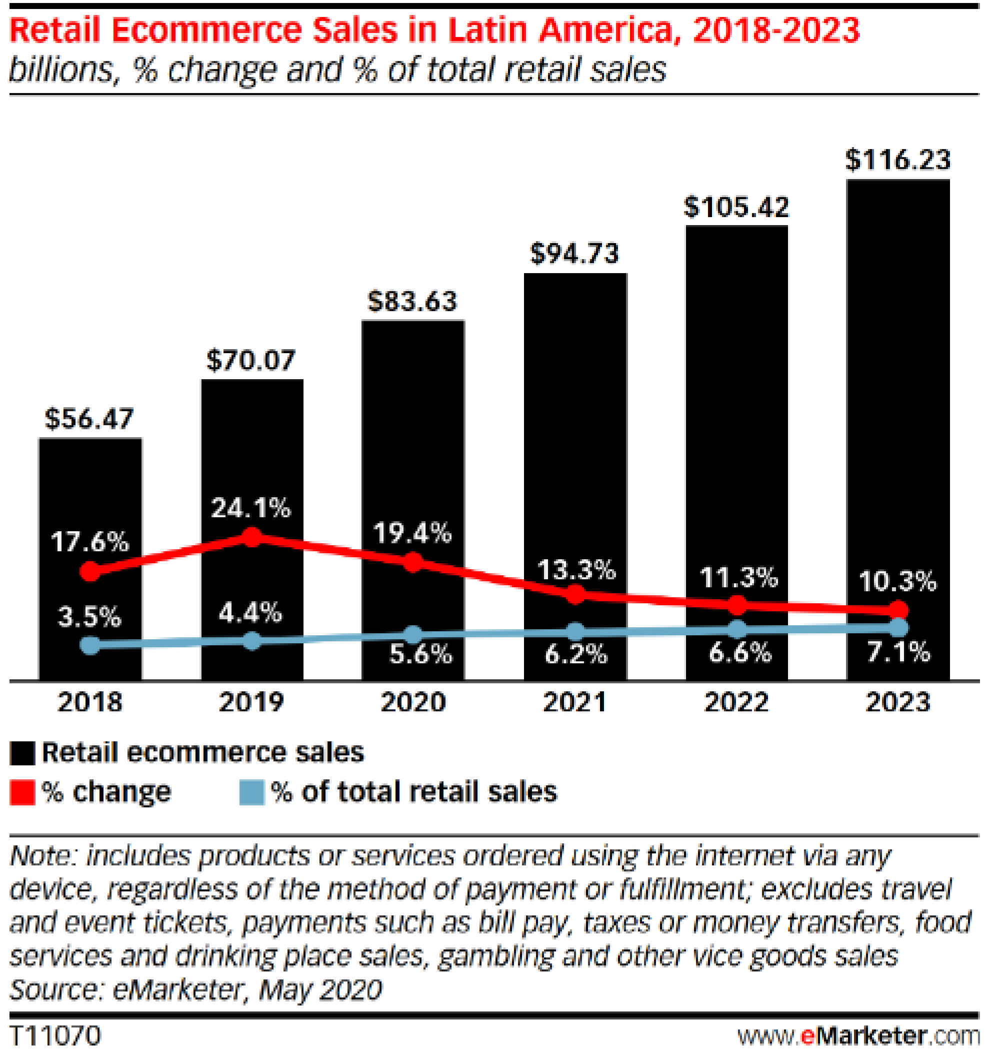
Ecommerce in LATAM



Source: Camara Colombiana de Comercio Electronico

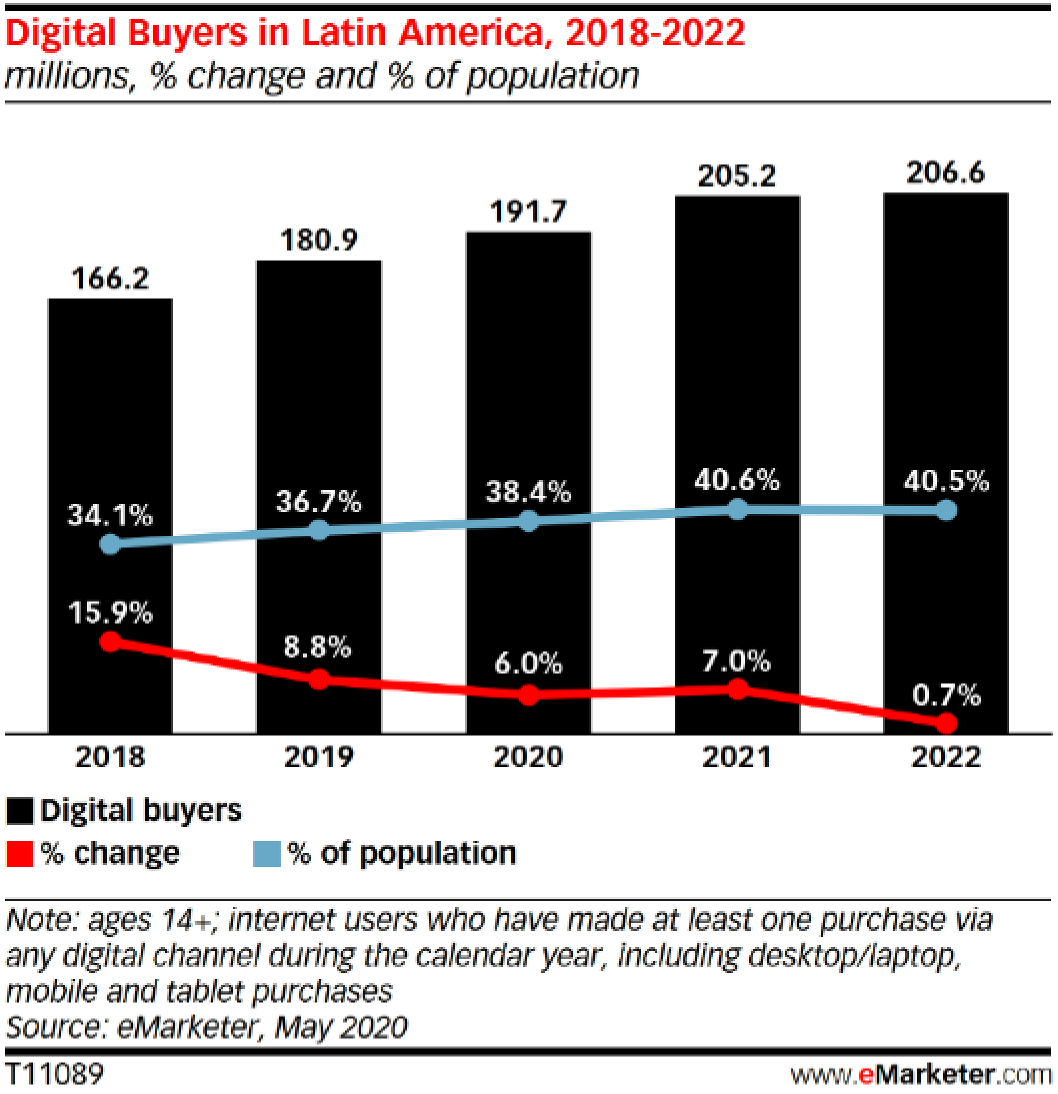
Ecommerce in LATAM

Ecommerce is a very prominent industry in LATAM.



Source: emarketer

Ecommerce in LATAM

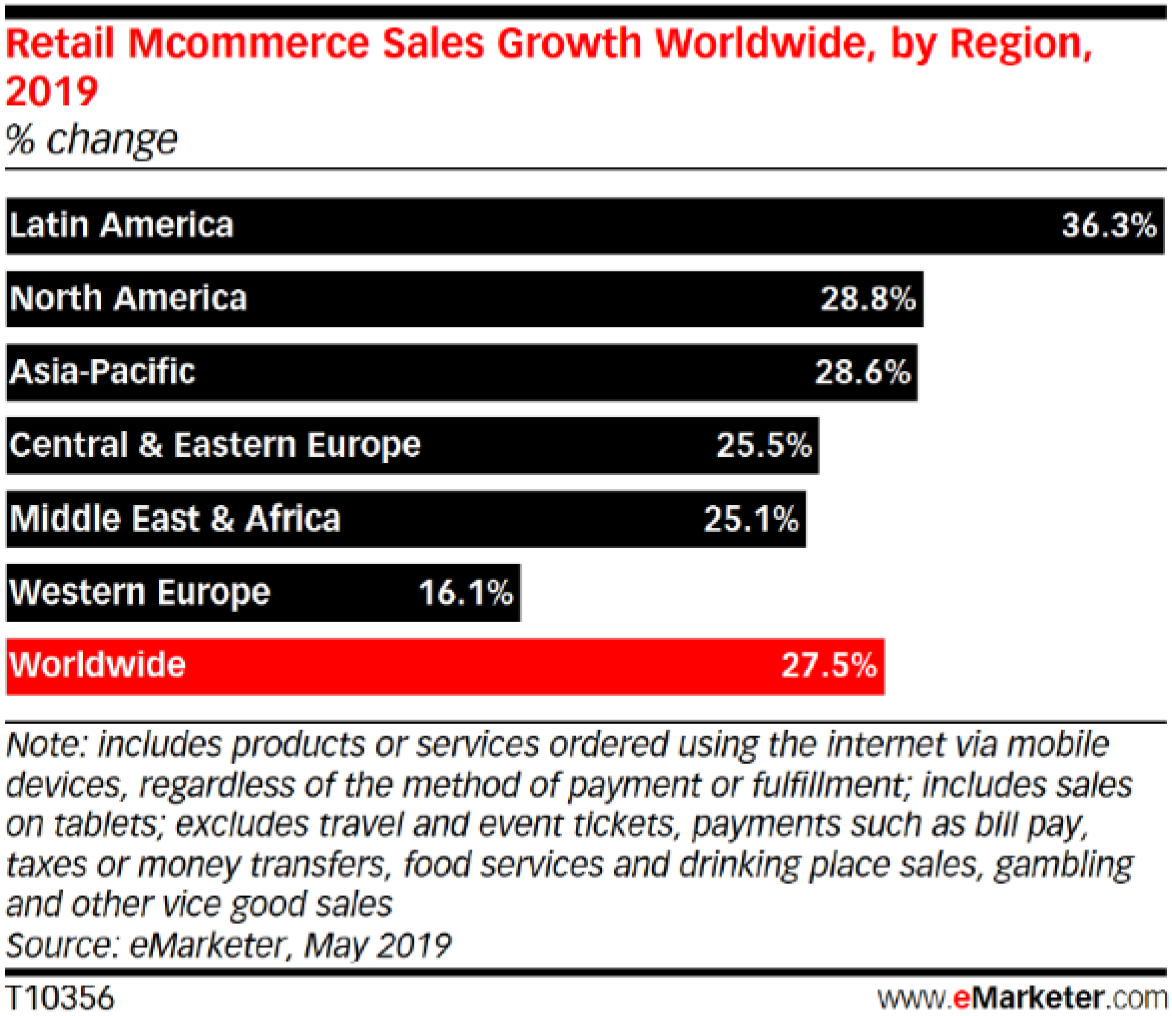


Almost 40% of the population are related to ecommerce activities.

Source: emarketer

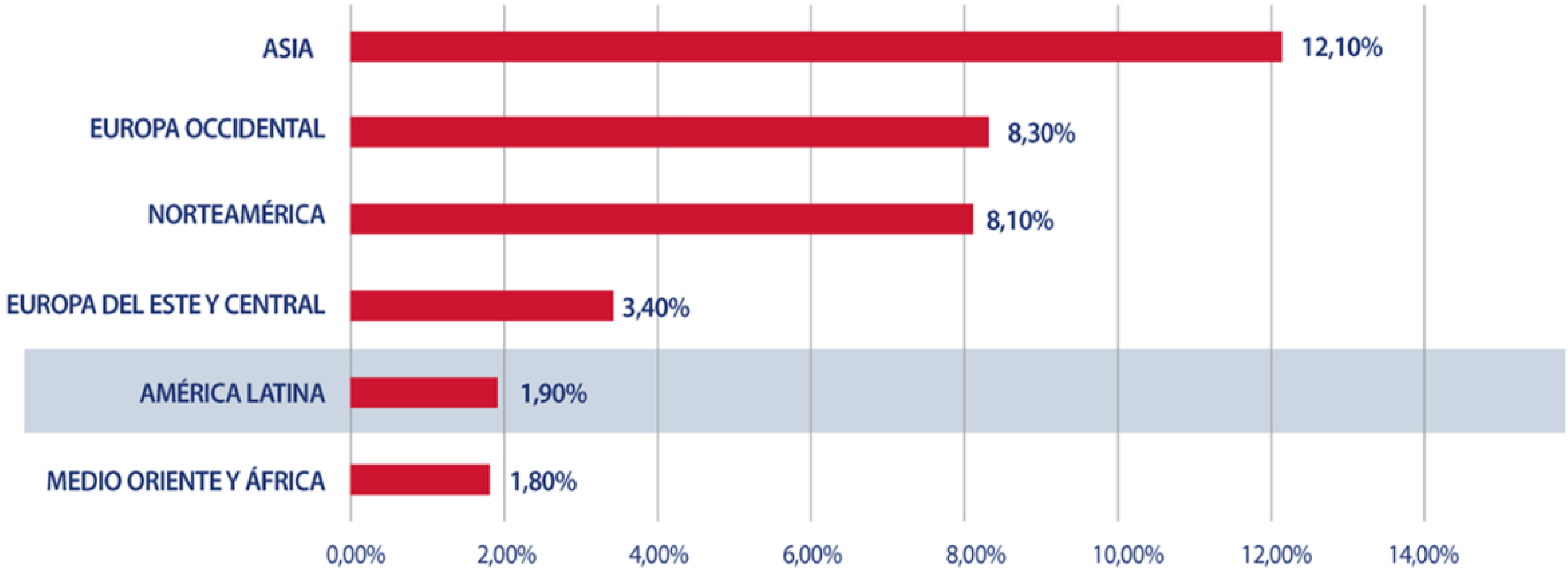
Ecommerce in LATAM

Mobile is very relevant for buyers in the region.



Source: emarketer

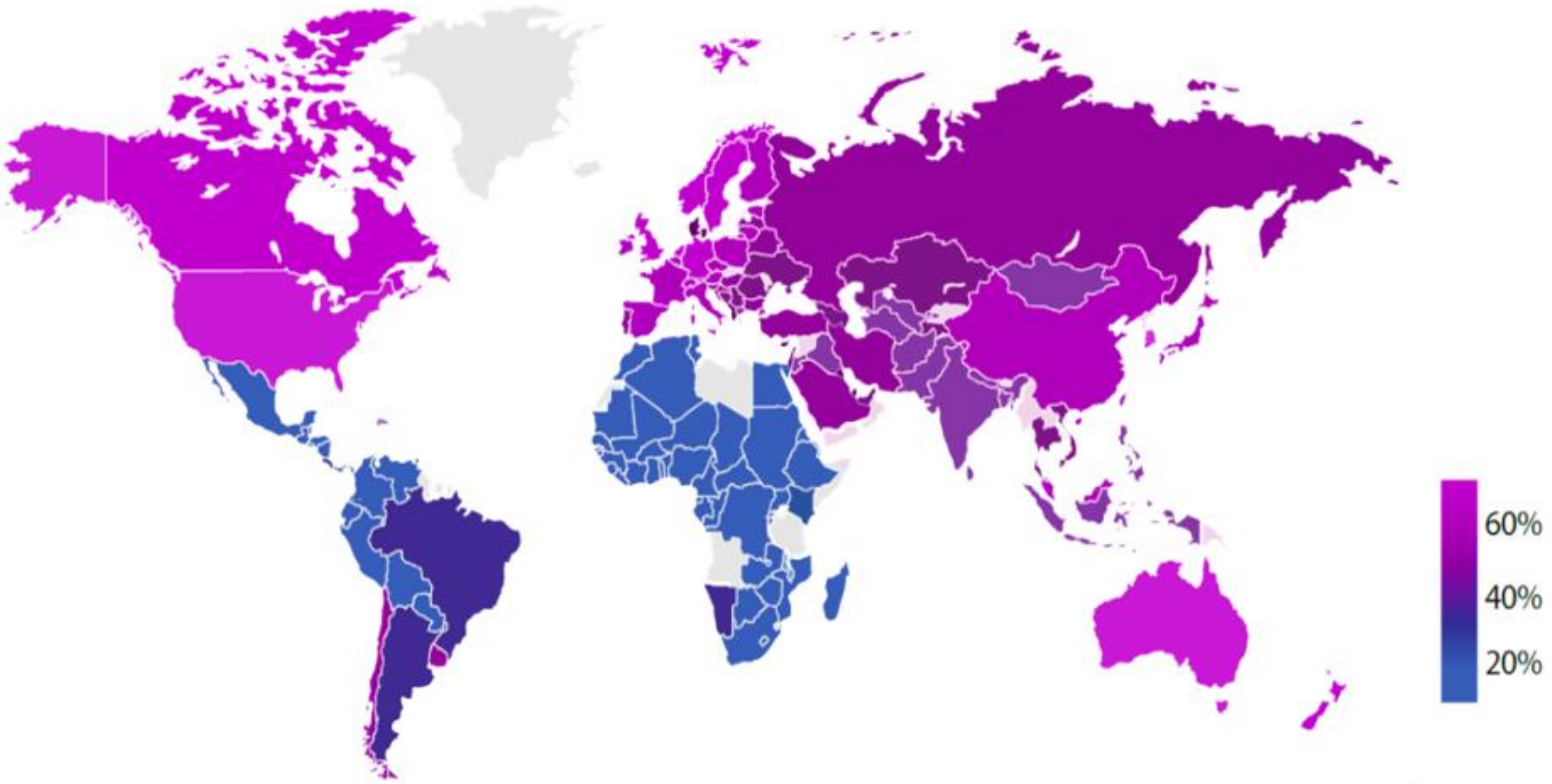
% of online transactions coming from retail sites



Source: Camara Colombiana de Comercio Electronico

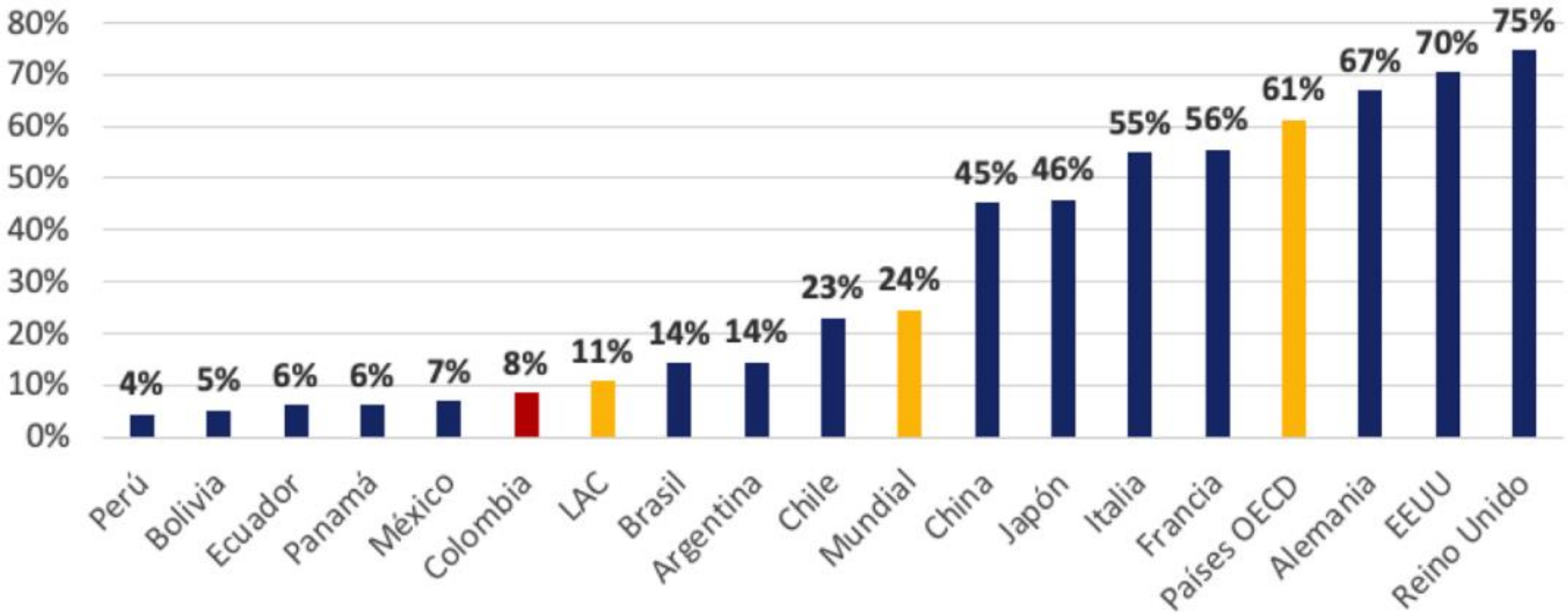
Ecommerce penetration

Latin America has a huge potential



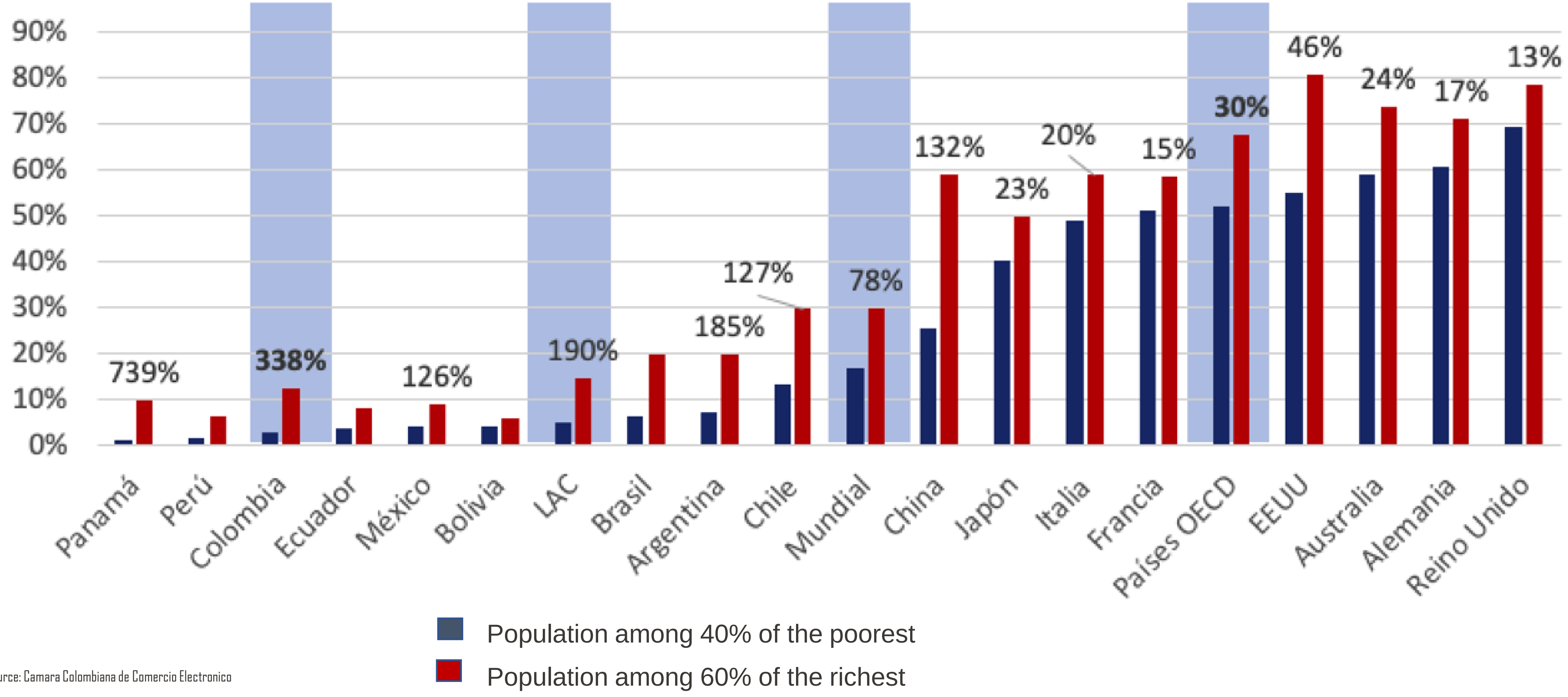
Source: Camara Colombiana de Comercio Electronico

% of population with Access to eCommerce



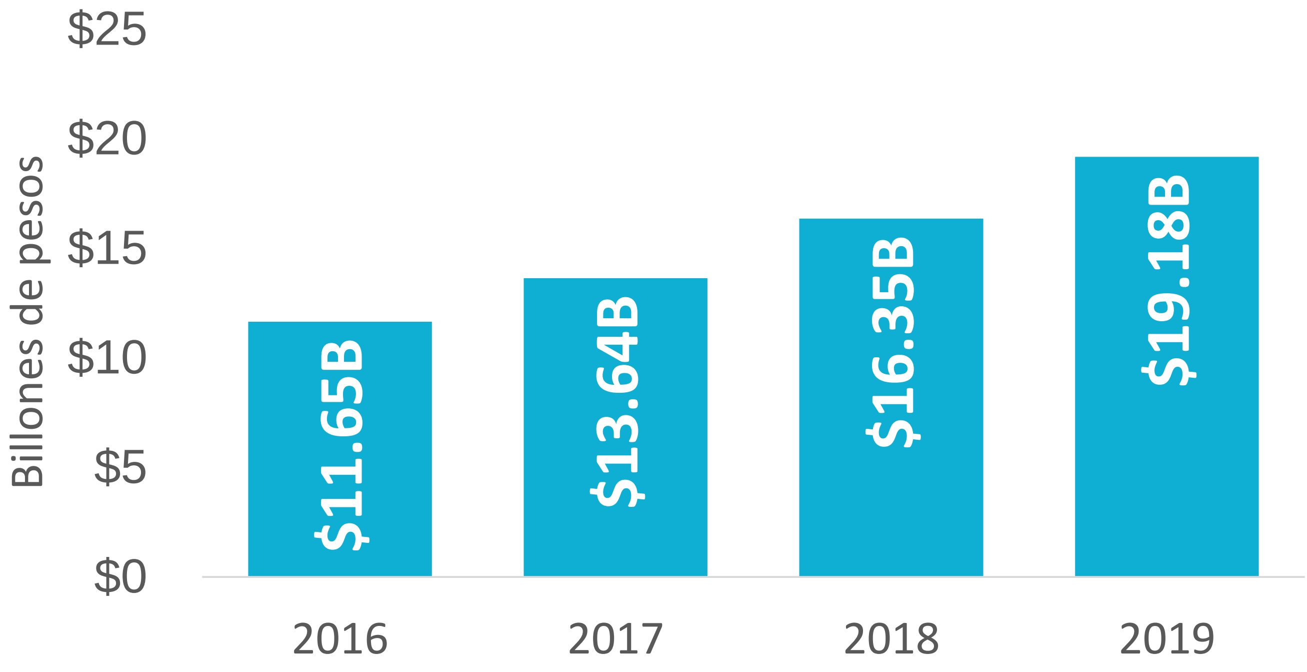
Source: Camara Colombiana de Comercio Electronico

% of population with Access to eCommerce



Source: Camara Colombiana de Comercio Electronico

Colombia: Total sales b2C



38.9%

Increase in # of transactions compared to 2019

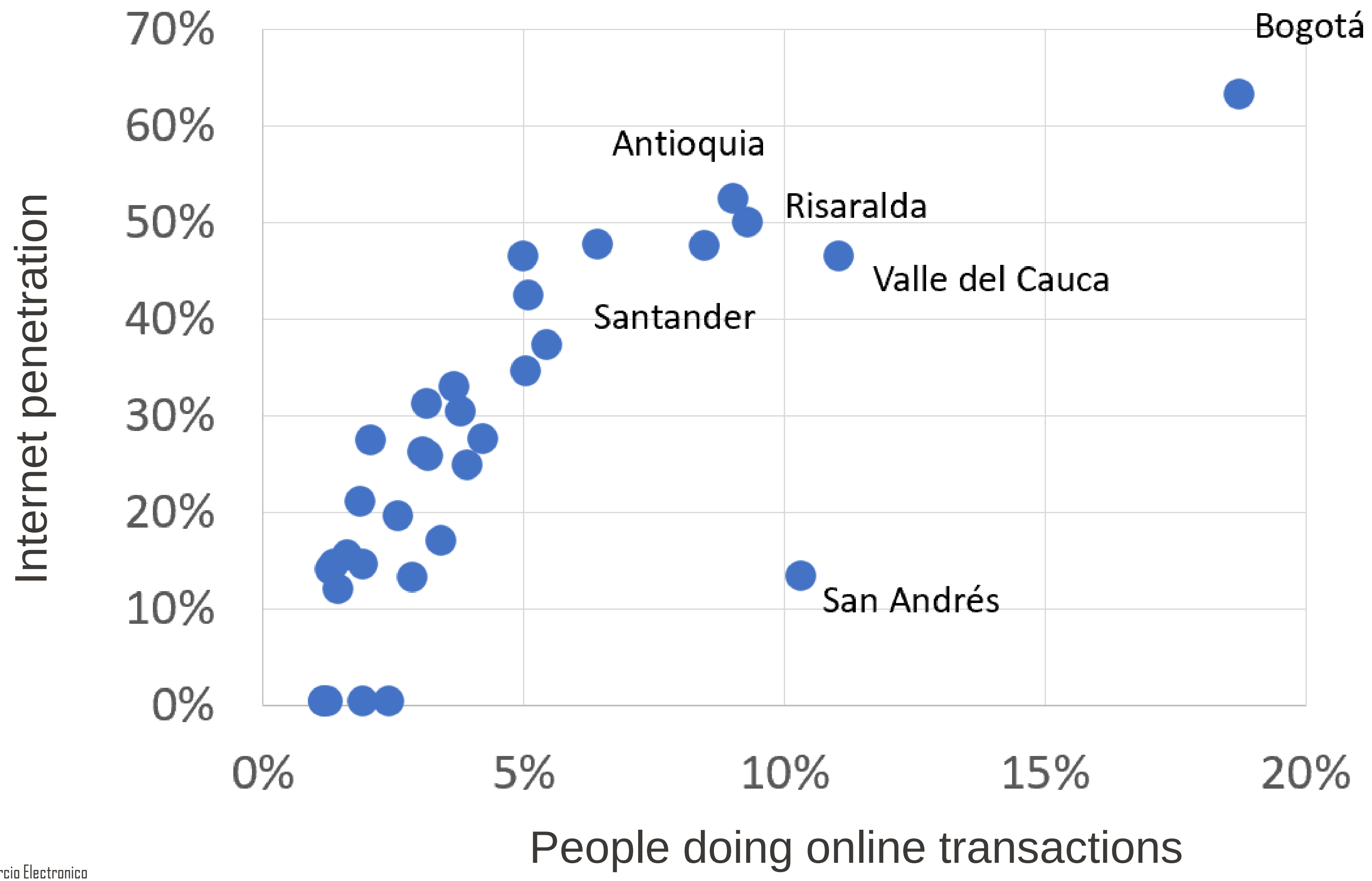
17.3%

Increase sales compared to 2019

*SOLAMENTE SE INCLUYEN TRANSACCIONES DE COMPRAS REALIZADAS Y PAGADAS A TRAVÉS DE INTERNET

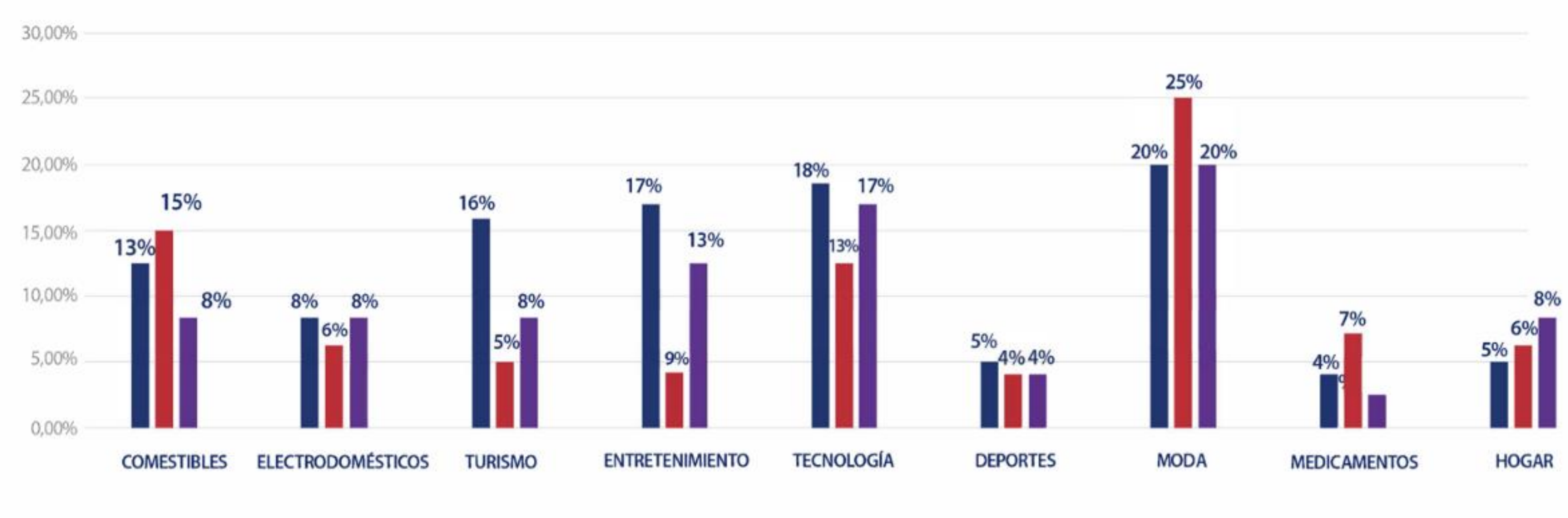
FUENTE: ACH, CREDIBANCO Y REDEBAN

Ecommerce penetration among main cities



Source: Camara Colombiana de Comercio Electronico

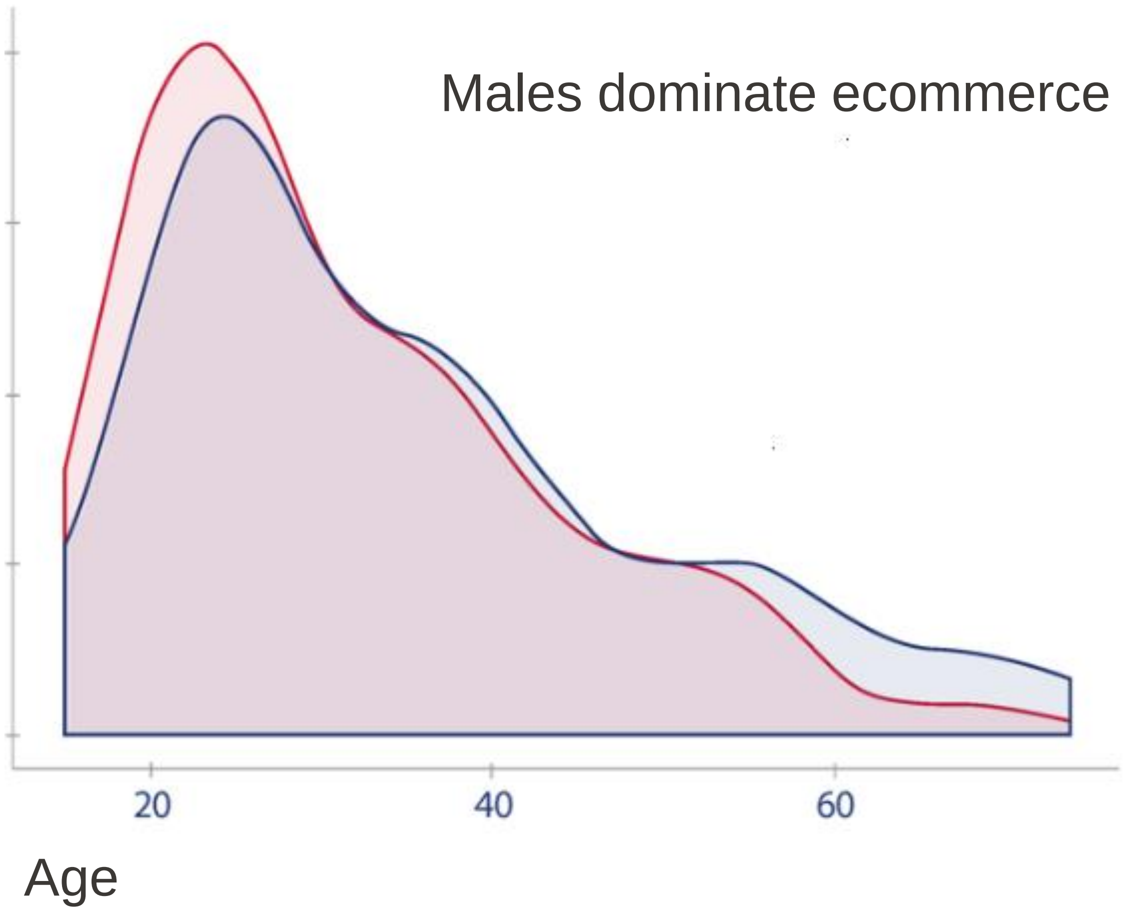
Online payment is not the most popular payment method in the country

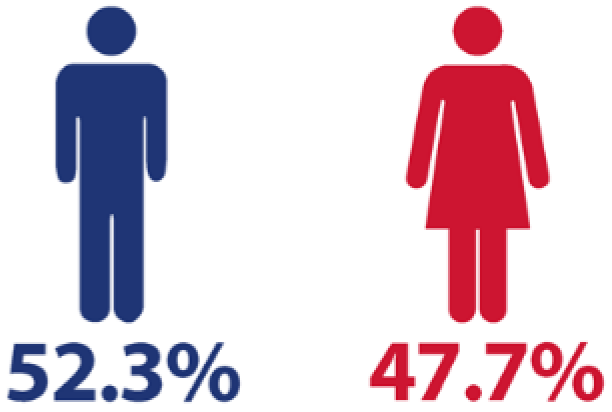


- Online payments
- COD payments
- Offline payment

Source: Camara Colombiana de Comercio Electronico

Ecommerce profile by age and gender

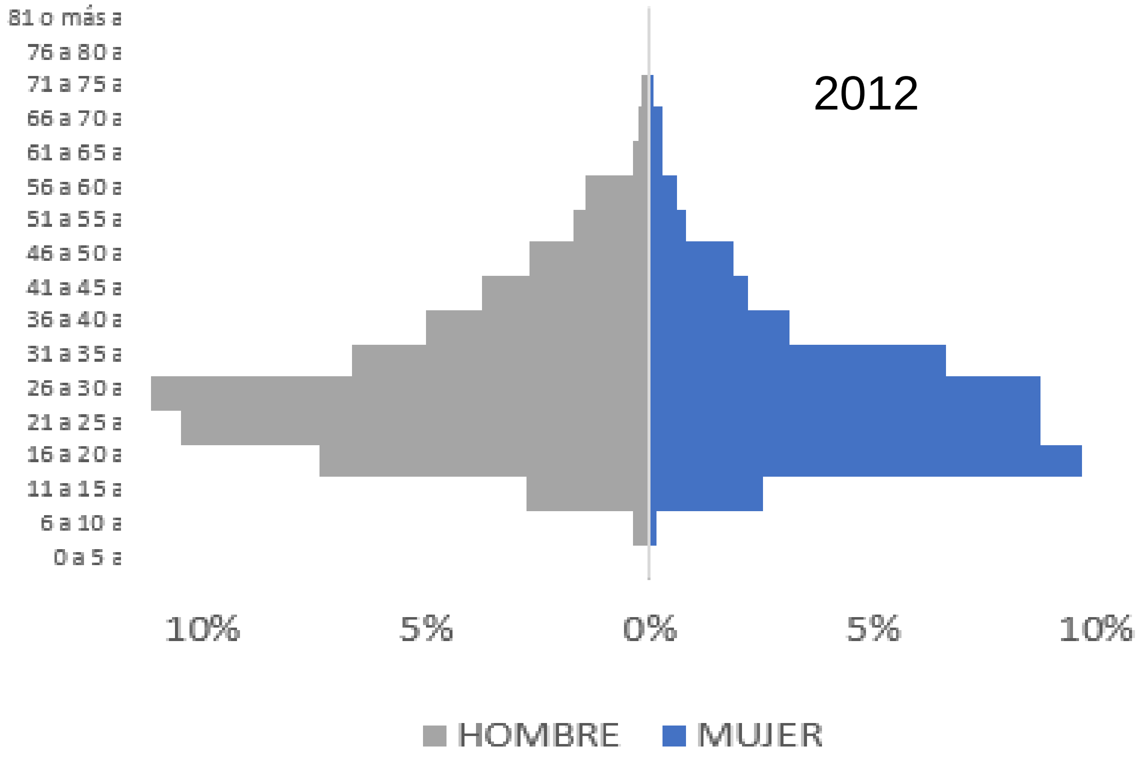


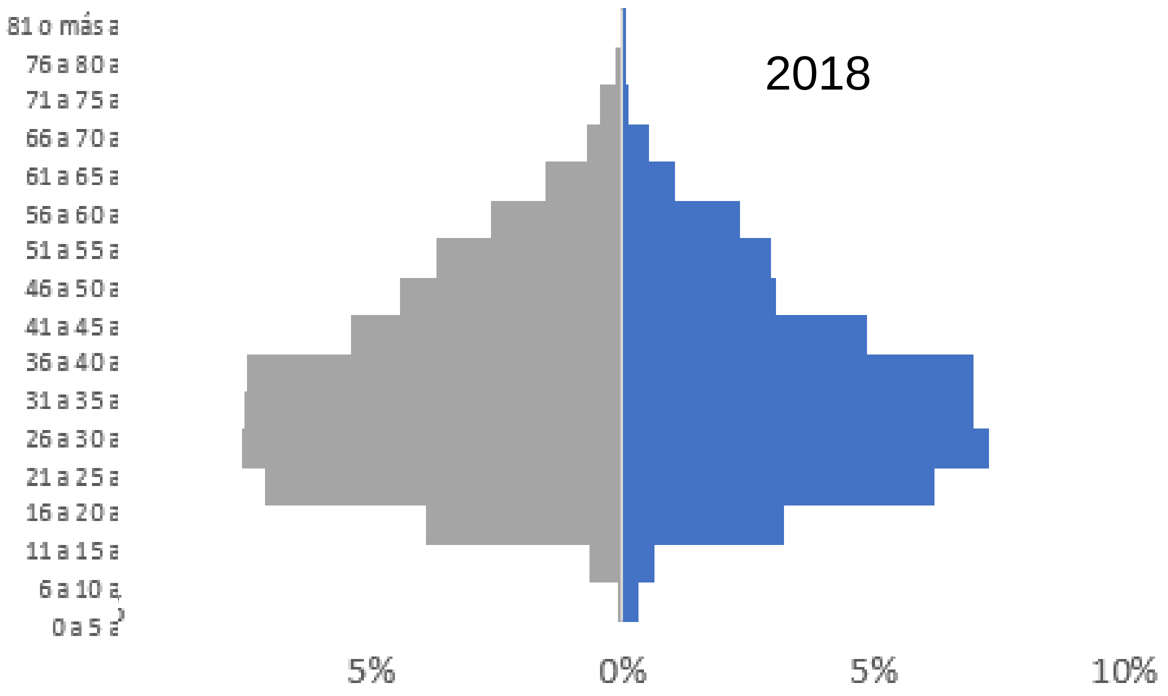


Male: 35
Female: 32

Source: Camara Colombiana de Comercio Electronico

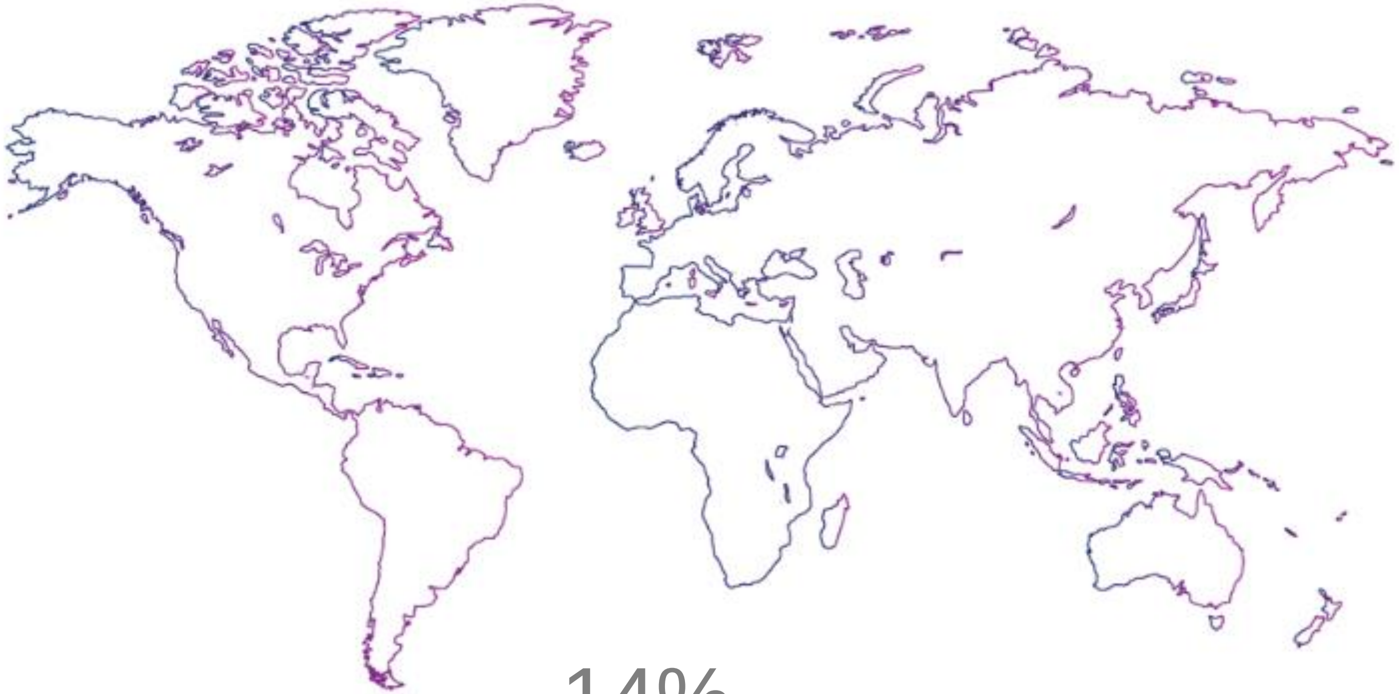
Ecommerce grew among older population





Source: Camara Colombiana de Comercio Electronico

Local vs. overseas ecommerce buyings



14%

86%

Source: Camara Colombiana de Comercio Electronico

Ecommerce activities

Percent of **internet users aged 16 to 64** who performing each activity in the past month

SEARCHED ONLINE FOR A PRODUCT OR SERVICE TO BUY (ANY DEVICE)	VISITED AN ONLINE RETAIL STORE ON THE WEB (ANY DEVICE)	PIRCHASED A PRODUCT ONLINE (ANY DEVICE)	MADE AN ONLINE PURCHASED VIA LAPTOP OR DESKTOP COMPUTER	MADE AN ONLINE PURCHASED VIA A MOBILE DEVICE
89%	86%	60%	36%	43%

SOURCE: GLOBALWEBINDEX (Q3 2019). FIGURES REPRESENT THE FINDINGS OF A BROAD SURVEY OF INTERNET USERS AGED 16 TO 64. SEE GLOBALWEBINDEX.COM FOR MORE DETAILS.

Ecommerce spend by category

Total amount spent in consumer ecommerce categories in 2019, in US dollars

Fashion & beauty	+18%
Electronics & physical media	+12%
Food & personal care	+24%
Furniture & appliances	+18%
Toys, diy & hobbies	+20%
Travel (including accommodations)	+7.1%
Digital Music	+10%
Video Games	+8.2%

SOURCES: STATISTA MARKET OUTLOOKS FOR E-COMMERCE, TRAVEL, MOBILITY, AND DIGITAL MEDIA (ACCESSED JANUARY 2020). FIGURES BASED ON COMPARISONS OF ESTIMATES OF FULL- YEAR CONSUMER SPEND IN 2019 AND 2018, EXCLUDING B2B SPEND. SEE STATISTA.COM/OUTLOOK/DIGITAL-MARKETS FOR MORE DETAILS. NOTES: DATA FOR DIGITAL MUSIC AND VIDEO GAMES INCLUDE STREAMING. □ COMPARABILITY ADVISORY: SOME BASE CHANGES. DATA MAY NOT BE DIRECTLY COMPARABLE TO FIGURES PUBLISHED IN PREVIOUS REPORTS.

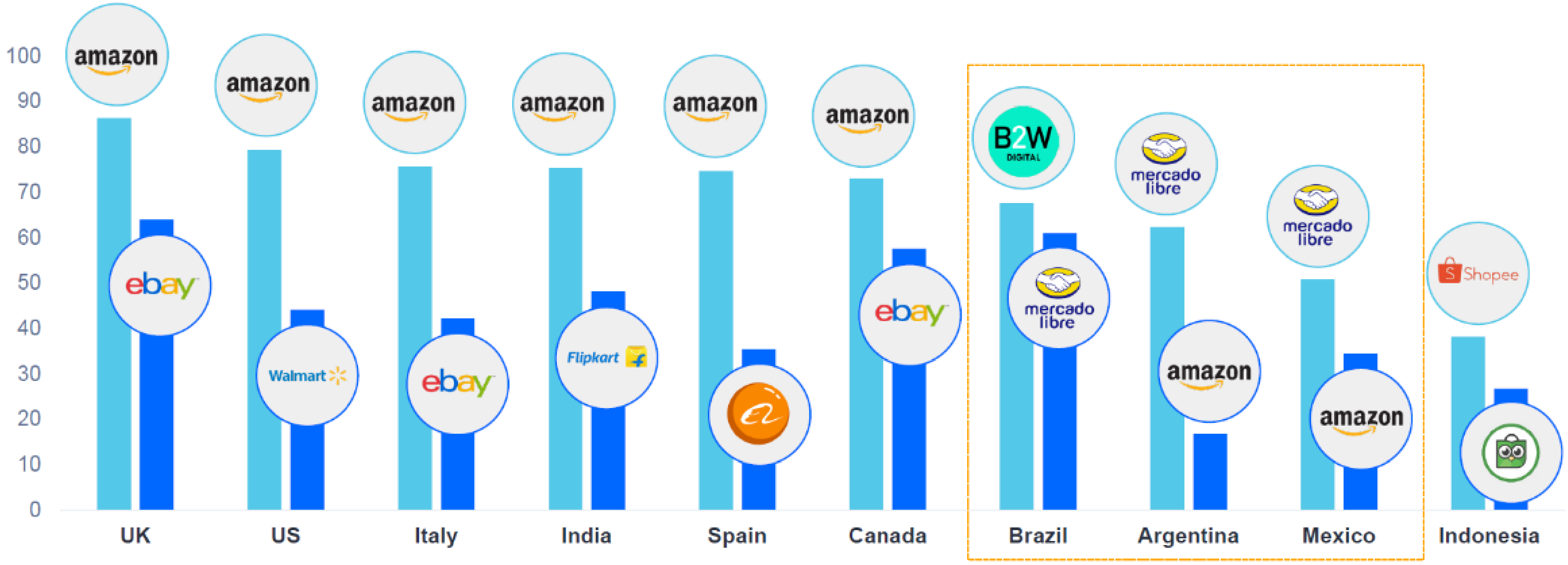
Ecommerce purchases by payment method

Percentage of ecommerce transactions completed using each method payment

Credit card	Cash	Bank transfer	E wallet	Other
57%	21%	17%	5.0%	0%

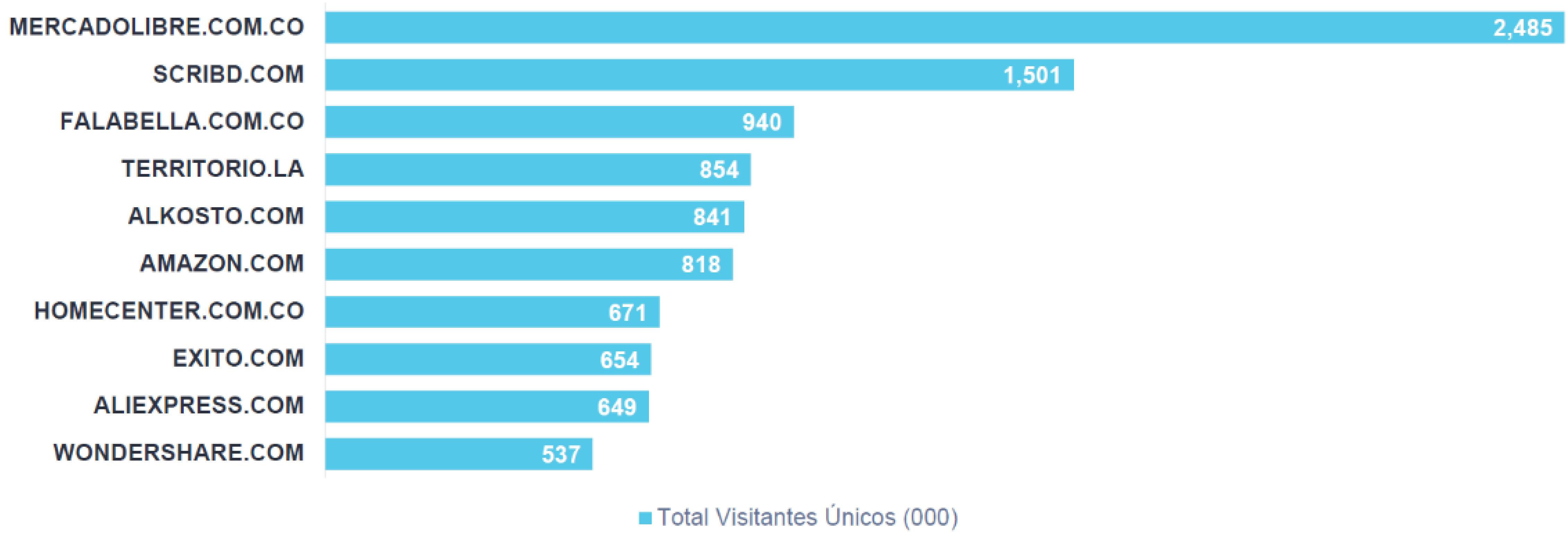
SOURCE: PPRO, PAYMENTS AND E-COMMERCE REPORTS (2019 & 2020 EDITIONS).

Meli dominates retail ecommerce in LATAM



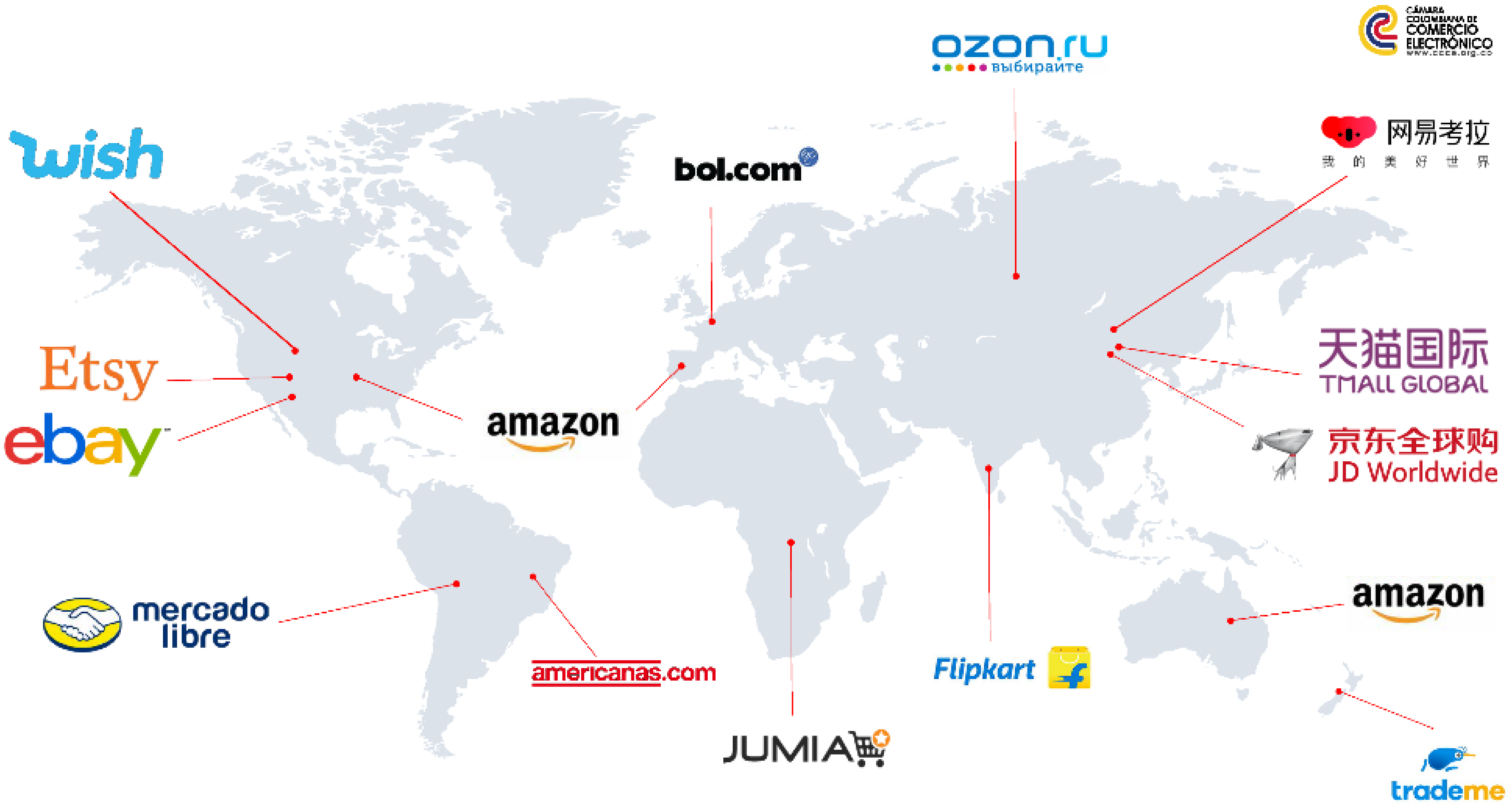
comscore

Meli dominates retail ecommerce in LATAM



comscore

Meli dominates retail ecommerce in LATAM



Source: Camara Colombiana de Comercio Electronico

Main players

WEB AND APP DEV

- Tech agencies
- Vtex
- Shopify
- Wix
- Woocommerce

Main platforms

- Mercado Libre
- Linio
- Falabella
- Éxito
- Homecenter
- Jumbo

Online payments (more than 50 options)

- Wompi
- Pay U
- EpayCO

Last mile logistics

- Quick
- Mensajeros Urbanos
- Rappi
- Vueltapp

Regulation

- Digital Signatures (Law 527 of 1999)
- Data protection (Law 1581 of 2012, and Law 1266 of 2008 for financial data)
- Consumer protection (Law 1480 of 2011)
- Sectorial regulations
- IP general legislation (trademarks)
- Ecommerce public policy document currently for public consultation
- Every Colombian commercial website must be registered in the registro mercantil and report to DIAN (art 91 of Law 633 of 2000)

Top google shopping queries

Most common Google shopping search queries throughout 2019

SEARCH QUERY	INDEX
1. Mercado libre	100
2. Samsung	61
3. Huawei	57
4. Celulares	55
5. Nike	48
6. Zapatos	47
7. Adidas	46
8. Vestidos	42
9. Alkosto	32
10. OLX	32

SEARCH QUERY	INDEX
11. Mercado Libre	29
12. Homecenter	28
13. Claro	26
14. Falabella	23
15. Xiaomi	22
16. Mercado libre Colombia	19
17. Google	17
18. Traductor	17
19. Dafiti	17
20. Linio	13

SOURCE: GOOGLE TRENDS (ACCESSED JANUARY 2020). NOTES: GOOGLE DOES NOT PUBLISH SEARCH VOLUMES, BUT THE "INDEX" COLUMN SHOWS RELATIVE VOLUMES FOR EACH QUERY COMPARED TO SEARCH VOLUMES FOR THE TOP QUERY (AN INDEX OF 50 MEANS THAT THE QUERY RECEIVED 50% OF THE SEARCH VOLUME OF THE TOP QUERY).

DIGITAL
ENTREPRENEURSHIP

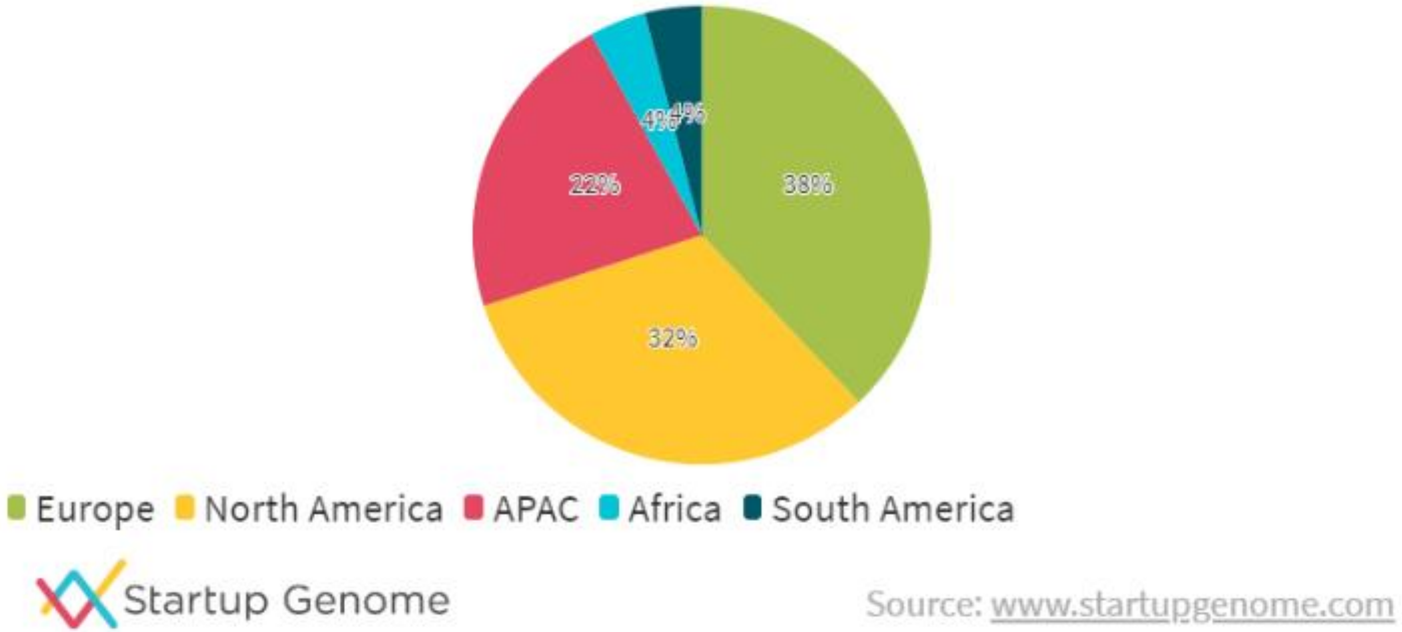
A growing ecosystem

The most recent edition of the report carried out by Startup Genome and the Global Entrepreneurship Network highlights financing alternatives and access to markets as two of the greatest strengths of Bogotá's entrepreneurial ecosystem, which outperforms cities such as Santiago de Chile and Buenos Aires.

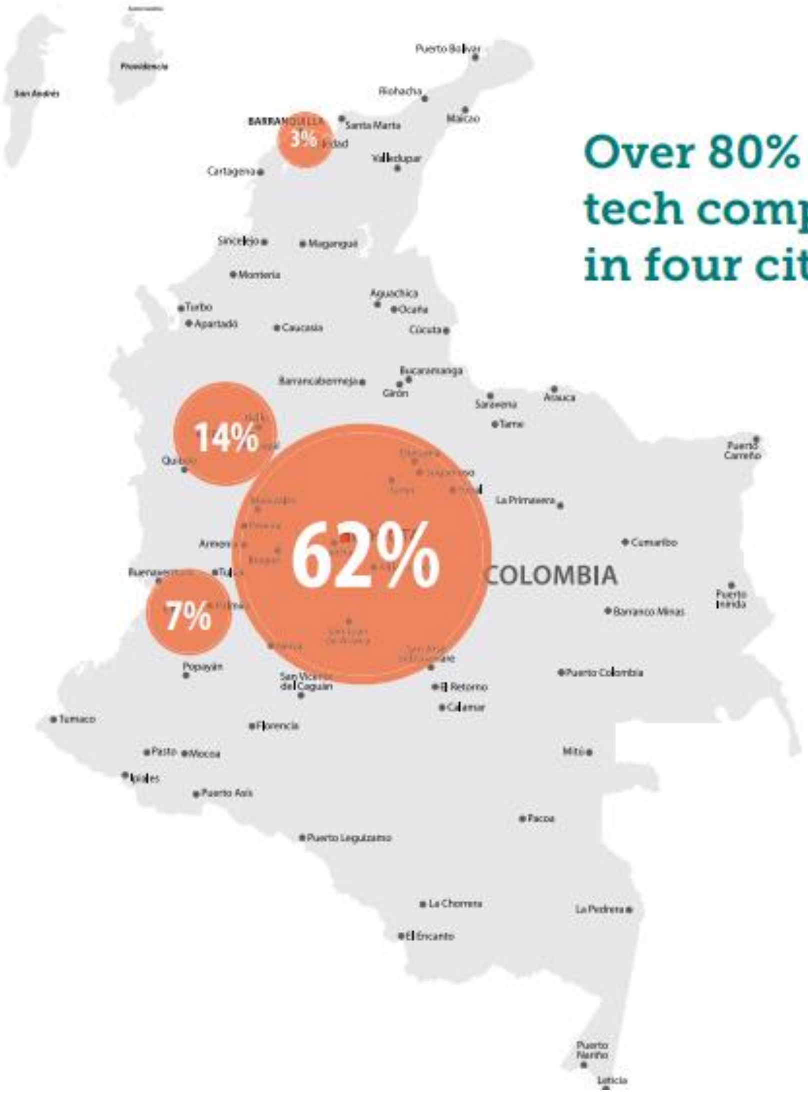
#31-40	Bogota	Colombia	South America

Europe and North America Constitute Almost Three - Fifths of Emerging Ecosystems

Share of Emerging Ecosystems by Region, 2020

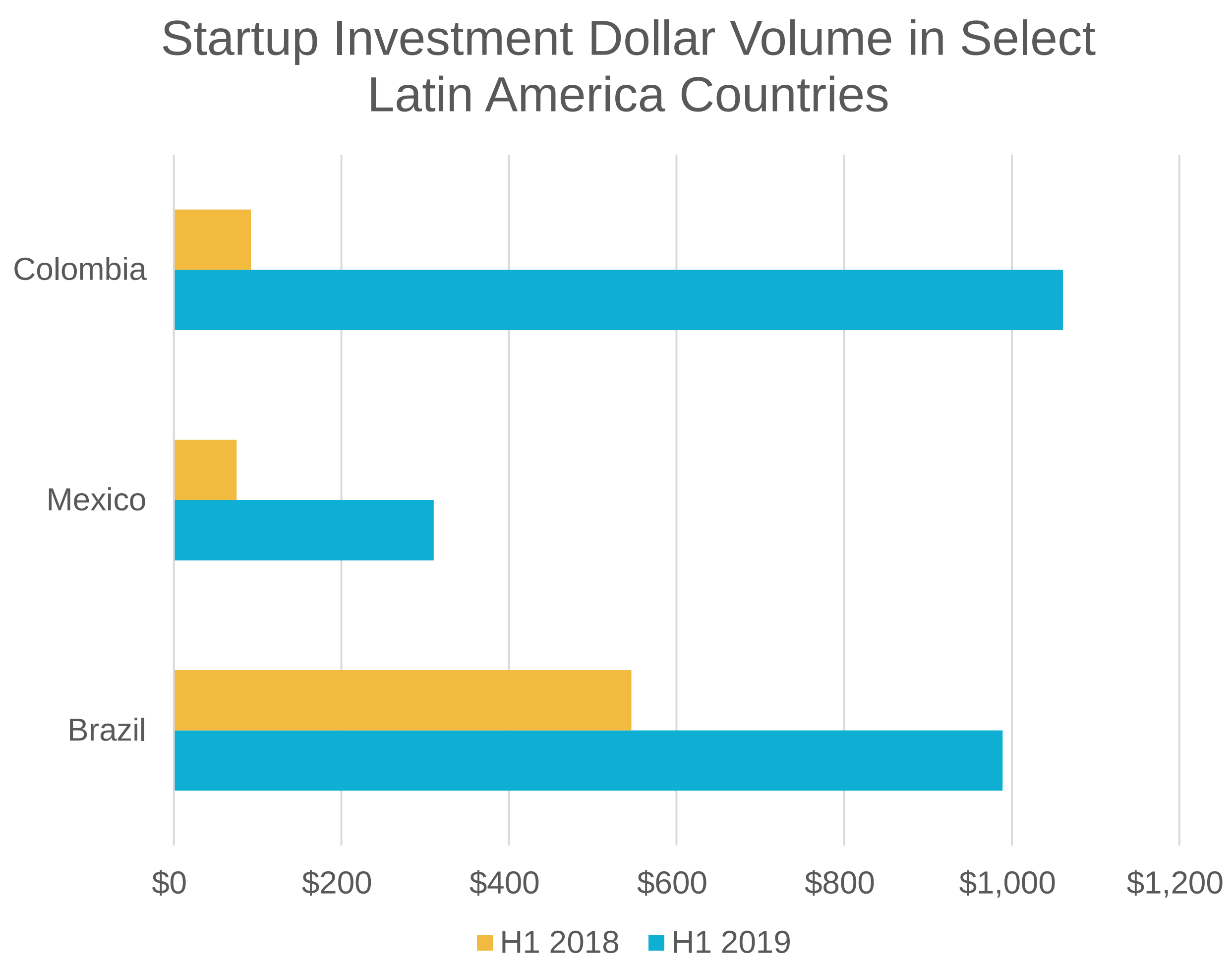


A growing ecosystem



Over 80% of Colombia's tech companies are located in four cities.

A growing ecosystem



SOURCE: THE ASSOCIATION FOR PRIVATE CAPITAL INVESTMENT IN LATIN AMERICA (LAVCA)

Mobile is the key to growth

Brasil historically gets 60% or more of the VC money, but Colombia getting traction (Rappi helped)

Recent funded startups

Fintech colombiana Addi levanta US$15 millones y alista su expansión

LAIKA levanta US$5 millones para escalar plataforma e-commerce para mascotas

Por Mariana López - julio 9, 2020 340

Emprendedores

Rappi levantó US$155 millones en nueva ronda en la que busca US$350 millones

Por José Caparroso

Los inversores existentes en la tecnológica colombiana incluyen a SoftBank, DST Global, Delivery Hero, Sequoia Capital, Andressen Horowitz, YCombinator, entre...

La Haus levanta US$10 millones y se perfila como la mayor 'proptech' de Colombia

Liftit levanta US$22,5 millones en Serie B automatizando la logística

El cofundador de Liftit Ángel Celis dice que estos recursos les permitirán invertir en inteligencia artificial y aprendizaje automático para reducir costos operacionales del proceso.

Publicado hace 3 semanas on 08/07/2020

Peiky US$1.3M round to prove Latam is where to launch global tech solutions

By Alejandro González Ormerod - July 21, 2020 306 0

A growing and dynamic startups ecosystem

Public support

- Innpulsa
- Apps.co (MINTIC)
- Fondo Emprender (SENA)
- Tecnoparques (SENA)
- Bancoldex
- Colciencias

Private support

- Cámara de Comercio de Bogotá (CCB) – all chamber of Commerce.
- Connect Bogotá
- ANDI del Futuro
- Bictia
- Endeavor
- Wayra
- HubBog
- Universities (Ean, Uniandes, others)
- Rockstart
- Founder Institute
- Platzi
- RUTA N
- Social Atom Ventures

Some of the most relevant startups

Rappi

lentesplus.com
LENTES DE CONTACTO

MERQUEO

torre

Some of the most relevant agtech startups

frubana

BIG DATA
CULTIVANDO FUTURO
COLOMBIA

innovakit

Some of the most relevant Edtech startups

Platzi

HYPERCUBUS

World Tech Makers

aulas AMiGAS

Holon IQ

ARUKAY

Some of the most relevant fintech startups