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BAROMETER

COLOMBIA
ASSESSING DIGITAL PARTICIPATION

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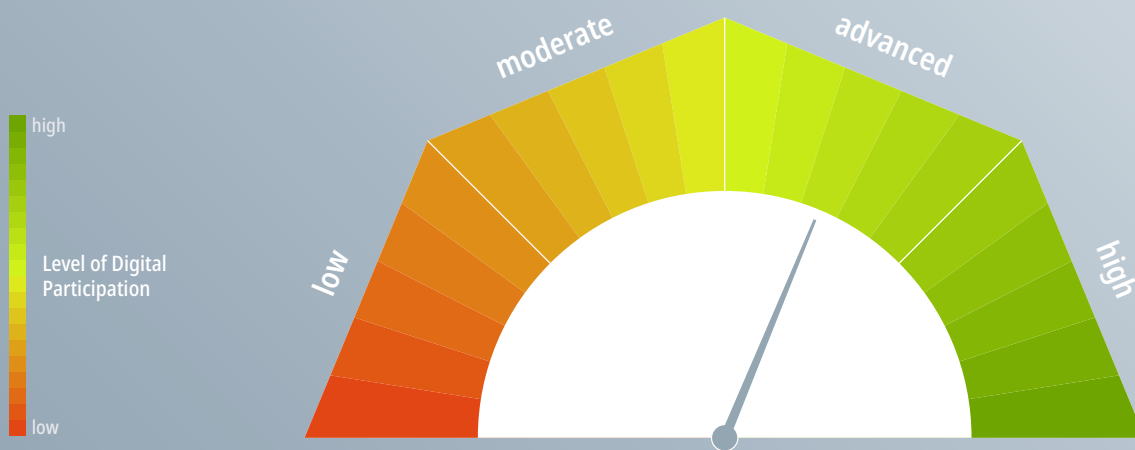
Colombia

The overall results of the #speakup barometer research suggest that the level of digital participation in Colombia is at an advanced level, as the needle is pointing to the green section of the barometer. Digitization in Colombia comes with opportunities and threats. Whether in the media, politics, the economy or education — nearly every facet of society faces its own challenges.

Key Findings

Colombia has made considerable progress towards becoming a digital society. The government is actively promoting start-ups and the expansion of broadband. As the peace agreement continues to be implemented, there is an opportunity for online participation to increase. However, it is not clear how quickly the digital divide — especially between larger cities and rural areas — can be completely overcome. This gap is visible not only in terms of access to the Internet, but also in terms of the presence of innovative digital media. Digital participation is limited by the deep-rooted violence apparent in the country, which is reflected in online behavior and a relatively powerful state surveillance apparatus.

ACCESS
The number of people accessing the Internet in Colombia continues to rise. While city dwellers have greater opportunities for access, connectivity in rural areas remains challenging.

DIGITAL RIGHTS
Held back by the past: a pervasive surveillance network left over from the height of Colombia's civil conflict is still in use today — and threatens to undermine basic freedoms.

MEDIA AND JOURNALISM
The traditional media outlets in Colombia are owned by the country's elite, leading to a lack of critical reporting of those in power. That's an opportunity for newcomers — but securing funding remains difficult.

SOCIETY
Colombia's long history of violence is reflected in abusive online behavior that disproportionately targets women. Initiatives to change that have begun, but will likely take a long time.

INNOVATION
The Colombian government invests a great deal to encourage innovation. Despite the creation of tech centers, tax incentives and direct support for developers, the growing start-up scene still faces an uphill battle.

Colombia
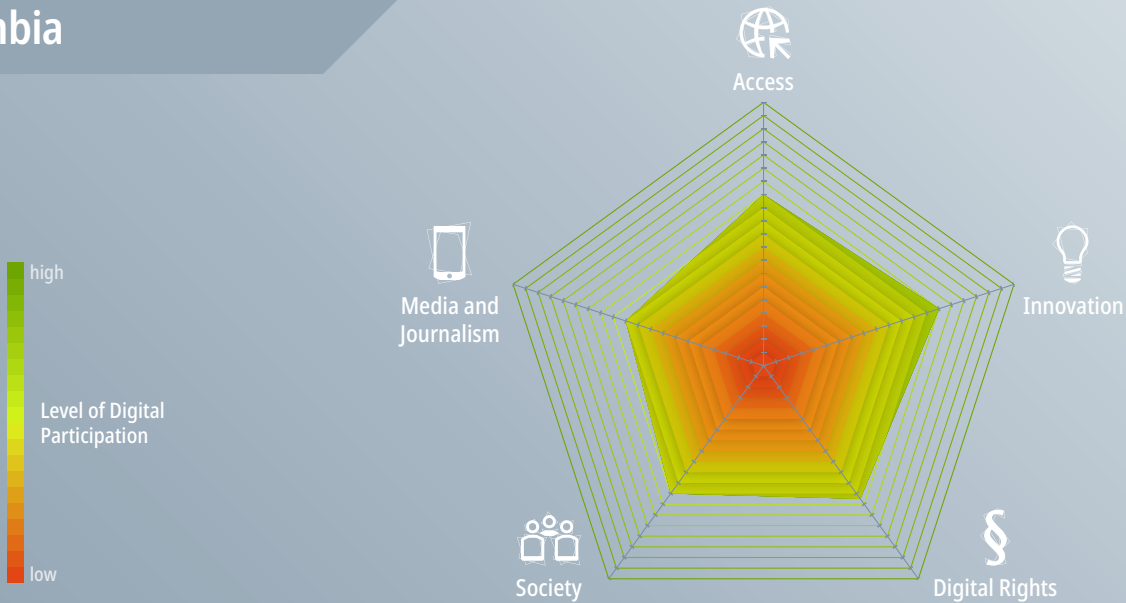
Specific results for various factors influencing digital participation in Colombia. The better the results in a specific cluster, the more the color field extends to the greener, outer edge of the web. While high costs and restricted access in some parts of the country negatively impacted results in the field of access, positive conditions for freedom of expression have resulted in a higher level of digital participation.

Access: Colombia is becoming an online country, but a digital divide still separates cities from the countryside

The number of people accessing the Internet in Colombia continues to rise. While city dwellers have greater opportunities for access, connectivity in rural areas remains challenging.

Summary

– Internet usage has become relatively accessible for many people in Colombia
– Going online is still too expensive for a part of the population, and service is often slow
– Especially in rural areas, access remains difficult
– The new government has promised to close the digital divide

Access

low
moderate
advanced
high

The overall Level of Digital Participation for Access: **advanced**

Three times a year, the Colombian Ministry of Telecommunications (MinTic) publishes a bulletin with the latest numbers on Internet usage in the country. Those numbers are invariably announced as a success, as they are rising steadily. According to the latest bulletin, published in November 2018, Internet penetration has reached 60 percent, with more than half the total population accessing the Internet through their mobile phones. Five years ago, only 15 percent of the population had access to broadband Internet. Colombia is increasingly becoming an online country as the Internet becomes part of daily life for many in Latin America's third most populous country (Colombia TIC 2018).

Looking at these numbers, it is clear that the country is on a positive trajectory. And it's not just the numbers: The connec-

tions themselves are stable — apart from the occasional power cut — and never disconnected.

This picture is backed up by organizations like the GSMA, which represents the interests of mobile network operators worldwide. According to its 2017 report, mobile operators invested more than $9 billion (€7.9 billion) in networks and spectrum since the start of the decade. "As a result, mobile broadband coverage in Colombia exceeds 90 percent for 3G, with 4G coverage expanding rapidly and now reaching nearly two-thirds of the population," the report states. And although the transition from 2G to mobile broadband occurred more slowly in Columbia than in other Latin American countries, "the gap will substantially close by the end of the decade except in comparison with the regional leaders — Brazil in particular."

Nevertheless, the above-mentioned numbers are a bit misleading. There are huge differences in how people are able to access the Internet, and a hard-to-solve digital divide continues to exist, especially between cities and the countryside.

Internet access is getting cheaper, but not cheap enough for everyone

The cost of going online in Colombia has been high for a long time compared to other OECD countries. One reason for that is that a large part of Columbian Internet traffic is directed through the US. That being said, prices have dropped. Indeed, the "Affordability Report 2018" published by the "Alliance for Affordable Internet" ranks Colombia second worldwide and first in the region for demonstrating "regulatory certainty, market maturity, and good practices within the telecommunications sector that help enable affordable broadband prices."

In relation to average income, access to the Internet is still not cheap, at least not for all consumers. While a 30 Mbit landline connection is about $30 per month in the capital Bogotá, the same amount only pays for 2 Mbit in a small town. Connection speeds have improved in Colombia, but they are still slower than in other Latin American countries such as Chile or Mexico, where the average fixed broadband Internet speed is about 5 Mbps.

Today, most people in Colombia use the Internet on mobile devices, 80 % usually with prepaid contracts (Colombia TIC 2018). One GB of data, for example, costs around $6.50. In comparison, the minimum wage in Colombia is about $260 per month.

Most network operators allow people to use WhatsApp and Facebook for free. This does, however, undermine net neutrality somewhat, as not all services are treated the same. Officially, net neutrality is guaranteed in Colombia, but there have been no known sanctions against the companies.

"There is not much competition, that's part of the problem," says Camila Pérez, an economist and author of a report on "Digital Colombia: Maximizing the Global Internet and Data

for Sustainable and Inclusive Growth" (Meltzer and Pérez Marulanda 2016).

Claro, a network operator that belongs to Mexican business magnate Carlos Slim's empire, controls about half of the mobile phone market. Although the experts interviewed don't see that as a good thing, there are also no clear indications that Claro has misused its market position. Portability was eased some time ago, and it is now possible for customers to change their mobile provider.

> **❝ There's great inequality. For people with fewer resources, it's much harder to go online.**
> **Camila Péreza,** Fedesarrollo

Visiting Colombia today, it's very common to see people holding a smartphone in their hands — a change from years past. It has become much easier to purchases the devices, too. A new Android phone (the most popular operating system), starts at about $60. These simple phones have recently been exempt from value added tax, making them cheaper to purchase. There are even better offers to be found on the second-hand market, but the devices there are often stolen, as cell phone theft is a huge problem in Colombia. The government has attempted to combat it by implementing a mandatory registration of the IMEI number, which allows for stolen phones to be detected.

In rural areas, access remains challenging

In Colombia's bigger cities, people generally have access to a good 4G connection, and even if they've run out of data, the Internet is still accessible using free Wi-Fi hotspots in shopping malls, restaurants and public institutions such as libraries.

The situation in the countryside is different for several reasons. Colombia is a geographically diverse country, with huge mountains, distant plateaus, rainforests, and marshland. It is also only sparsely populated in many areas, making it difficult to build up the needed infrastructure. Furthermore, politicians as a rule tend not to show much interest in the countryside. The armed conflict that has strangled Colombia for decades also plays a role, with many regions not having been accessible at all until recently.

But there are plans to improve the situation. At the end of 2017, MinTic announced that 98 percent of municipalities are now connected to the Internet. It also underlined that 793 of the 1,101 municipalities now have access to mobile connections via 4G technology. While these numbers sound quite promising, in reality, the Internet connection is in the center of the town, established by fiber optic cable or satellite signal, and in most cases does not reach the places where people actually live, work and travel.

There have been various efforts to allow people to go online who don't have Internet access at home. One government-run project set up about 7,000 so-called "digital kiosks" in rural areas (which don't always work as they should). There are also several NGO initiatives that use different technological approaches .

What are the new government's plans?

The government of President Juan Manuel Santos, whose term ended in August 2018, put a great deal of emphasis on digitalization. Under the banner "Vive Digital" (Live digitally), the project included plans to adopt broadband coverage around the country. The new government under President Iván Duque promised to continue this process, with a sector policy for the next four years. Under the banner "The digital future belongs to everyone," it aims to accelerate the closing of the digital divide. According to the government, a strong cooperation between the private and public sectors is necessary in order to connect 100 percent of Colombians.

At the time of publication, it is unclear whether this path will be successful, and if so, how quickly. By the end of 2018, the latest update was that most of the "digital kiosks" will only be in operation until July 2019, and that others have already been closed.

Recommendations

Improve access in rural areas

The most important measure in Colombia is the one that politicians have already recognized: ensuring that everyone has the opportunity to use the Internet. Access is most difficult for people living in remote rural areas. When the Internet is expanded, the government should also more clearly define what precisely they mean by "broadband" Internet, as information is often relatively vague. The government must also be more transparent in its published statistics. The fact that a municipality is online says relatively little about how many people truly have network access.

Making mobile services more customer-friendly

It is relatively complicated in Colombia to decide between mobile Internet offers. In particular, cheaper deals are often rather customer-unfriendly (e.g. because credit expires quickly). Simpler, more transparent and cheaper offers are needed to make it easier for people with weak financial resources to use the Internet on the move.

Strengthen net neutrality

At first glance, it appears to be positive that people in Colombia can usually use WhatsApp and Facebook, even without active mobile data. But upon further reflection, that access can create problems. People are becoming more and more dependent on the big global companies, who are trying to organize everything consumers need on their own platforms. This has a negative impact on the development of local alternatives and slows down the development of the national tech scene. It is also less likely that people will use (messenger) apps with stronger data protection settings. The Colombian government should therefore ensure that net neutrality is guaranteed, so that people have equal access to all Internet services.

§

Digital Rights: Colombia's sprawling spy network a threat to progress

Held back by the past: a pervasive surveillance network left over from the height of Colombia's civil conflict is still in use today—and threatens to undermine basic freedoms.

Summary

– Freedom of speech is guaranteed offline and online
– A widespread state surveillance network inhibits freedom
– Strict copyright laws are sometimes used as a means of censorship
– Government institutions must act fast to protect data

Digital Rights

low
moderate
advanced
high

§

The overall Level of Digital Participation for Digital Rights: **advanced**

In recent decades, nothing has shaped Colombia more than the violent struggle between left-wing guerrillas, state armed forces and paramilitaries. Amid the fighting, the protection of digital rights was among the areas neglected. During the worst of the conflict, a surveillance apparatus was set up in Colombia, the exact scope of which remains unknown. "The Intelligence and Counterintelligence Act restricts freedom of expression in an indirect way," says Amalia Toledo of Karisma Foundation, a civil society organization based in Bogotá that has been working on digital rights for years. The law grants authorities unfettered access to spy on citizens without a judicial order, like monitoring the electromagnetic spectrum. In 1993, a law was introduced that prohibits the use of "communication devices that use the electromagnetic spectrum" to send "encrypted messages or in unintelligible language." However, so far it is not known whether this particular law has had an impact on digital communication in practice.

Other controversial provisions require Internet providers to create a 'back door' for the prosecutor's office to access user data. That's on top of rules requiring providers to store connection data for five years. Throughout the legal code, the legacy of the civil conflict looms.

There is plenty of evidence that illegal surveillance is a reality in Colombia, particularly for those seeking to scrutinize the powerful. In particular, journalists investigating corruption and irregularities within state security institutions have been subject to online (and offline) monitoring. The practice extends beyond the media. The communications of the individuals negotiating the country's peace agreement were also intercepted, allegedly by elite army cyber-spies. It has been also revealed that the National Colombian Police purchased malicious software from Hacking Team, an Italian firm specializing in intrusion. Journalists have claimed that the software was used to spy on them.

In Colombian society, state surveillance is seldom questioned; it was generally viewed as legitimate because of the conflict situation. The capabilities of the surveillance state apparatus can at times make it challenging to protect journalistic sources. In 2017, the Colombian Supreme Court ruled that a business magazine had to reveal its sources for an article about –apparent irregularities" by Leyla Rojas, a former vice minister of water who at the time was responsible for sustainability at a coal project owned by a Brazilian business magnate (CPJ 2018). After a fierce backlash, another chamber of the court ruled in favor of the publication and stated that journalistic work "is an exercise of the right to freedom of expression and information and, as such, democratic, legitimate and adjusted to the Constitution (Nalvarte 2018)."

Free speech guarantees

Leaving aside the challenges of the conflict, the outlook for freedom of expression in the country is not bad. In 2012, the Colombian Constitutional Court said that freedom of expression—as granted in Article 20 of Colombia's National Constitution—applies not only offline but also in the online world. Although there are no Internet or media specific laws in Colombia, a legal framework that guarantees the fundamental rights of its citizens in the digital sphere does exist. This is backed by Colombia's membership of the inter-American human rights system. The Inter-American Court of Human Rights, as its judicial organ, has also defended digital rights. It is one of the few countries globally, where Freedom House found no "key Internet controls." In its latest "Freedom on the Net" report, Colombia is rated as "partly free." According to the organization, "prosecution, imprisonment, or detention for ICT activities is quite rare in Colombia." That means that everyone can, in principle, freely access information on the Web and publish content without restriction.

Censorship challenges

Although the situation is positive in many respects, there are still problems in exercising the right to freedom of expression. A climate of threat can lead to self-censorship and other constraints (Freedom House 2018).

In places where no government censorship exists, other means are often deployed to suppress unwanted stories. In Colombia's case, it has been private actors rather than the state who have sought to censor, relying on Colombia's harsh penalties for copyright infringement. In recent years, one case in particular has attracted widespread attention: student Diego Gómez faced up to eight years imprisonment for uploading an academic thesis to the Internet. Although Gómez did not personally profit, the author of the thesis pushed for a criminal prosecution. In 2017, however, the Supreme Court finally ruled in favor of the accused — and thus against an abuse of copyright law (Fundación Karisma 2017). The judgement backed civil society movements that fight against Colombia's intellectual property law and promote open access to information and a fair use standard.

> " This country does not have a conscience when it comes to protection of the private sphere. For example, people are accustomed to giving their fingerprints everywhere.
>
> **Amalia Toledo,** Karisma Foundation

In other cases, 'right to be forgotten' has been used to make unwanted material disappear. Although there is no specific law yet, the Colombian Supreme Court has ruled on this issue, concluding that, in some instances, the right to honor and privacy carried more weight than the right to publish. The court ruled it was not the search engines that were responsible for removing the content, but the media producers, who were required to update their texts and, if necessary, have them removed from the index of the search engines. Since then, more and more individuals have sent media outlets intimidating letters in order to demand unfavorable stories be removed. "However, the so-called 'right to be forgotten' has no legal basis and the relevant jurisprudence is not uniform," states the press freedom organization FLIP, which advises media groups on how to defend themselves against such claims (FLIP 2018).

There have also been problems with the big tech companies. On some platforms, political content has been blocked for reasons that are not always clear. In the case of YouTube, there have been reported cases of blockades because of copyright issues, explains Pedro Vaca from the Foundation for Press Freedom (FLIP). There have also been reports of political satire being removed from Facebook, with the platform describing it as "inappropriate content" on the basis of their internal guidelines, he says.

Data protection

It is not just about private companies when it comes to data protection. There is a data protection law, but in practice it has been inadequate. The business-focused Chamber of Industry and Commerce is the body responsible for regulating the law. Critics say it is not an organization that pays special attention to human rights aspects when it comes to data protection. Amalia Toledo of the Karisma Foundation says mobile operators are not scrupulous enough in protecting their customers' data. This also applies to mobile phone registrations: the files of the mandatory IMEI registration are stored in a central database operated by a private company. According to the Karisma Foundation, data protection standards are especially poor when it comes to data collected by government entities. Toledo says there is no oversight of government programs and that government websites often have glaring weaknesses in terms of cyber security.

But as a civil society organization, Karisma Foundation is trying to take a constructive approach. Working with the government, it has begun to analyze official websites such as the Unit for the Attention and Integral Reparation to the Victims to see whether they comply with the requirements of the Data Protection Act, whether the website is digitally secure, and how robust privacy protection practices are. In that specific case, they were able to ensure that the shortcomings discovered were quickly rectified (Fundación Karisma 2017).

Toledo and her colleagues want to continue the struggle, so that digital participation is not endangered by technical pitfalls.

Recommendations

Fighting excessive government surveillance
Civil society should strengthen its oversight of government surveillance, and its efforts to reign in the excessive use of it, as it endangers the fundamental rights of citizens.

Data protection in every field
Many Colombians are skeptical of card payments or online shopping, due to data protection concerns. Yet they do not question the widespread collection of fingerprints. There is, therefore, a need for better awareness and clarification of what data is actually worth protecting and for which reasons — so that political consequences can follow.

Promoting digital self-defense
As even particularly vulnerable groups such as social activists and journalists do not have sufficient knowledge of digital security measures, more long-term and comprehensive training programs should be introduced.

Media and Journalism: New digital alternatives are highlighting issues the powerful would like to ignore

The traditional media outlets in Colombia are owned by the country's elite, leading to a lack of critical reporting of those in power. That's an opportunity for newcomers — but securing funding remains difficult.

Summary

– There has been an "explosion" of digital media outlets in Colombia
– Digital media sites offer a greater variety of content than traditional media outlets
– Most of the websites are based in the capital and other big cities
– Born-digital media outlets mainly depend on external funding
– The insecure financing of digital media outlets also has an impact on their independence

Media and Journalism

low
moderate
advanced
high

The overall Level of Digital Participation for Media and Journalism: **moderate**

As more and more of Colombia goes online, people are beginning to use a greater number of online portals to access information. At first, there were only a few alternatives to choose from: the websites of the national newspapers, weekly magazines and radio stations, which were still very focused on their classic format but also publishing content on the Internet. From there, a unique development within Latin America became apparent.

"In the last 10 years there has been a huge explosion of digital media," according to María Paula Martínez, journalism professor at the Universidad de los Andes in Bogotá. Some exist for just a little while, others remain, but audiences are very different in size. Many of them offer local regional content or have a thematically specific focus, such as on sports news. A recent study counted 680 digital media websites in Colombia, one third of which are based in the capital (Consejo de Redacción 2018).

These media newcomers — such as "La Silla Vacía (The Empty Chair)" — can log up to 500,000 visits a month. In comparison, the largest news site, the online version of the print newspaper El Tiempo, receives 5 million visits. But despite their comparatively small size, these digital outlets have gained a greater relevance in national public debates.

Soon after its creation in 2009, La Silla Vacía was already very successful and had gained substantial recognition. According to the "Mapping Digital Media" report, that "because it provides reliable information and investigative journalism stories." The

report also cited a 2010 survey among opinion leaders that listed La Silla Vacía as the fourth most-read publication and the third in the capital Bogotá. From the very beginning, the website dealt with political scandals, including the one surrounding Colombia's "false positives" scandal. As part of their reporting on the scandal, the website published documents on members of the military who were accused of killing civilians in order to subsequently claim that the dead were guerrilla members. The study points out that those documents "actually helped the families of the victims to gather evidence for a legal process."

More diverse than traditional media outlets

Traditionally, private media outlets in Colombia are owned by the country's elite. They "participate in other economical business sectors as well as in politics. This puts independence of the editorial lines of media outlets at risk as well as reinforcing self-censorship of the journalists," states the Media Ownership Monitor by Reporters without Borders (Reporters without Borders, 2015). This creates a very conservative atmosphere in the newsrooms of traditional media outlets, leading to a lack of critical reporting on the powerful. In contrast, new media outlets not only increase plurality as such, but also often take a progressive approach, with a strong focus on human rights, social inequality and sexual diversity.

Certain digital alternatives such as "Las Dos Orillas," founded in 2013 by several nationally renowned journalists, do provide national cross-spectrum coverage as well as trying to highlight

issues that don't appear in the traditional media. Some target a particular area, such as the underreported Pacific region. Others are very specific in content. For example, Mutante.org, founded in 2018, focuses on sexual violence against girls. Compared to the content provided by the classic media, these new outlets allow people to inform themselves about issues that are sometimes more relevant to their reality. They also manage to establish a strong connection to their readership, leading to a longer-term engagement with the issues.

A remarkable number of digital media sites take an investigative approach. They don't rely on breaking news but deal with an issue intensively and for a sustained period of time. The media organization Conectas, for instance, participated in the "Panama Papers" investigation.

"We seek to experiment with all kinds of technology, platforms, narratives and concepts, to explain how power relations are woven and operate in Colombia," says founder and director of La Silla Vacía, Juanita León, cited in the "First Study of Digital Media and Journalism in Latin America (Factual 2016)," which recognized the site's "good digital practice."

It's not just websites that are enriching journalism and thus social discourse in Colombia: There are also important political YouTubers, as well as media content produced by minorities, including indigenous groups, on social media. For example, the Nasa, an indigenous community in southwestern Colombia, produce a podcast that reaches its audience via WhatsApp. This is a small step toward amplifying the voices of under-represented groups.

Money from foundations and international grants
When discussing the potential of digital media in Colombia, one important question cannot be ignored: Where does their funding come from? Online journalism is a complicated business, even for traditional media outlets, since Colombians are used to free content on the web and revenue from online advertising is very low. Only recently have media companies instituted paid content models. For its part, the public media — TV and radio — depends exclusively on state funds.

Compared to traditional media, new digital media outlets require a relatively small budget simply because they are much smaller, often employing only a handful of people. They also have a large number of university-trained journalists at their disposal — who are usually not well paid. "Journalism in Colombia is a titanic job," says Ginna Morelo from Consejo de Redacción, a journalists' association, "You only do it if you believe journalism is necessary for democracy."

Since the websites still can't run their business purely on advertising revenue, they all depend in principle on external donors from the philanthropic and development cooperation sectors. La Silla Vacía, for example, has received funding from the Open Society Foundation, but also tries to make its readers aware of

their responsibility toward the site through crowdfunding campaigns. This in turn allows readers to have a say in how research priorities are set.

Independence is difficult
In both the public media outlets and the large private collections, the situation is relatively clear: Their ownership structure severely limits their independence, as does their pronounced dependence on advertising, primarily from state institutions and large companies. There may not necessarily be any clear red lines for reporters, but the fear of losing one's job can nonetheless lead to self-censorship.

In this respect, the new media outlets have an advantage, although they also depend on others, who come with their own particular interests. "Pacifista," a website founded by Vice which covers the peace process, even received direct subsidies from the Colombian government. There has been no indication that donors will interfere directly in editorial matters, but the selection of topics to be funded is nonetheless determined by their agenda.

Recommendations

Make media financing more sustainable
In order to increase and secure the quality of digital media, sustainable financing is essential. In order to maintain independence, funding should not come from a select few external donors. Instead, the media can orientate itself on the best practice examples in the country, how to secure financing primarily from readers, but also through advertising and other revenue streams (such as conferences and seminars). In the medium term, the media should also create a financial basis which allows for more continuous critical reporting.

Improve working conditions
The output of media organizations greatly depends on the people working there. Since working conditions in journalism in Colombia are quite poor (badly paid and not very predictable), there is a need for improvement, including better professional training for both new and established journalists, and continuing education on the job. This is particularly true in rural areas, where work is much more dangerous due to the greater influence of various violent actors.

Establish local media
In the countryside is often only a single information source in many municipalities (or none at all), local journalistic initiatives should be encouraged to create high-quality media products that more closely resemble the lived realities of their audience than those produced by the media in Bogotá (FLIP 2016).

Society: Fighting back against an online culture of violence targeting women in Colombia

Colombia's long history of violence is reflected in abusive online behavior that disproportionately targets women. Initiatives to change that have begun, but will likely take a long time.

Summary

– The Internet can be a tool to increase women's participation, but it's not being used effectively
– Women are disproportionately exposed to hate speech and cyberbullying
– On a political level, huge disinformation campaigns have taken place
– Several digital education efforts are under way, but their effectiveness is unclear

Society

low
moderate
advanced
high

The overall Level of Digital Participation for Society: **advanced**

The Internet can give people who are discriminated against by society an opportunity to make themselves heard. That's especially true for women in Colombia: For them, the Internet has become an important medium to help draw attention to the issues that affect them. During the most recent presidential election campaign, for example, one group drew attention to women's issues which they wanted the candidates to address. But there are other issues of use and access that disproportionately affect women in Colombia.

For some women, it is difficult to be present online at all. A recent study by the Ministry of Telecommunications (MinTic 2018) shows that one out of three women who don't use the Internet are indigenous—a disproportionately high number. Generally speaking, although a gender gap in Internet use exists, it is not that wide. But we can see a gender-based difference in how people use the Internet. According to the Colombia chapter of the "Women's Rights Online" report (Fundación Karisma 2015) (World Wide Web Foundation 2015), men tend to use the Internet to inform themselves, while women see it more as a source of entertainment. "Of the women surveyed, few use the web as a tool to increase their citizen and political participation or to find relevant information," the report states. The ministry study came to the same conclusion, adding the use of social networks and communication in general to the list of most prevalent activities. The information most consulted by female Colombians is thus associated with: health (77%), education (50%), employment (43%) and finally—to a much lesser extent—social and political participation (8%).

Online abuse of women

Women who are active online participants are also the group facing the most problems on social networks. "There is a lot of

violence against women on the Internet," says Ariel Barbosa from the NGO Colnodo. He adds that men are increasingly using spyware to control their wives. Articles with headlines such as "Five applications to find out what your partner is hiding" are frequently printed in Colombian newspapers.

Aggressive discussions, hate speech, and cyberstalking are issues that women have faced in Colombia for years. Fifteen percent of Colombian women have experienced some form of violence against them via communication technology, according to the ministry study, which also assumes a high number of unreported cases. According to the journalist association FLIP, "in 2017, the number of social network attacks on journalists increased, especially on women who received mainly verbal attacks and stigmatization against their work (Andrés Camilo, Gómez Forero 2018)."

A culture of violence that extends to the Internet

The risk is even greater if the women who express themselves online are social activists, especially if they represent a minority. Their situation has always been difficult, but with the 2016 signing of the peace agreement between the Colombian government and FARC rebels, the number of activists killed has risen. In 2018 alone, at least 124 representatives of civic organizations were killed, especially in those regions where the conflict was most active (Hinman and Vidal 2018).

As a country that suffered for decades under an armed conflict and a high level of general crime and domestic violence, Colombia has a culture of violence that has unfortunately extended into the comparatively new medium of the Internet. People can post whatever they want on social networks with relative impunity. Some general regulations apply, but there are no special

national regulations for social media platforms and the only content that is blocked in Colombia is child pornography. "The state's response to allegations of online threats or intimidation turns out to be very slow or non-existent," concludes the "Women's Rights Online" report. It says the affected women respond in different ways, from blocking their attackers to withdrawing from social networks. But it's clear that what happens on a social network can have terrible effects in real life, as in the case of a Venezuelan citizen who was lynched in Bogotá in reaction to a false rumor spread by WhatsApp chain message.

Disinformation as a political weapon
Posts on social networks not only have the potential to cause grave personal effects, but they can also impact politics. Colombia's polarizing 2016 referendum on the peace agreement, rejected with a margin of just 55,000 votes, was marred by "fake news." Primarily actors from the right-wing political spectrum (the "no" side) tried to influence the vote with false and frightening news about Colombia becoming a communist country.

This led however to the emergence of a number of projects aimed at fighting false information on the Internet, particularly on platforms such as Facebook. One such verification initiative is Colombiacheck founded by Consejo de Redacción, a journalists' association, and financed mainly by international cooperation initiatives (including DW Akademie). Its work began with reviewing the negotiations between the government and FARC guerrillas in Havana, Cuba, and the impact of the agreements on Colombian soil. The project "WhatsApp Detector" focused on WhatsApp messages, which are much more difficult to oversee (Serrano 2017).

It makes sense to focus on such social networks, since many Internet users in Colombia find everything they need on just a few platforms, such as Facebook. According to company figures, 21 of Columbia's 50 million people log onto Facebook daily, while some 28 million people log in at least once a month. The platform is also widely used by media outlets and social activists to spread information—one way to reach people with political content.

Teaching young people to behave differently
One approach to improving the way people use the Internet is a long-term strategy, based on familiarizing even the youngest citizens with fair and socially responsible online behavior. The Colombian government has decided to focus on digital education, proudly announcing that "more than 2.2 million pieces of equipment were delivered to students in 43,000 public educational institutions across the country." As a result, it says that "Colombia went from having 24 children sharing the same equipment in 2010 to just 4 students in 2018." As part of the "Computers for Education" program, nearly half of the country's 160,000 teachers are to receive training in using computers in the classroom.

Related projects in the field of digital education are mainly, but not exclusively, directed at children and teens. Examples include "Promoting a Responsible Digital Lifestyle," "Escuela TIC Familia (Family School for Youth Information Technology)" or "JuvenTIC (Youth and Information Technology)." It is notable that these projects are mainly carried out or supported by mobile phone and Internet companies.

Girls are also particularly in the spotlight here, since the aforementioned ministry study came to the conclusion that although young women are interested in working in a MINT subject, ultimately biased thoughts such as "these are courses for men" or "my parents don't like this" often prevent them from doing so.

It's not yet clear what kind of impact these initiatives will have and how many people they will reach in the end. Sometimes they fail for simple, foreseeable reasons such as a school being equipped with tablets but no Internet connection or staffed by teachers who don't know what to do with them.

Recommendations

Encourage people to create their own (political) content
Greater active digital participation is needed in Colombia, not least because important decisions are being made for the future of the country in the course of the ongoing peace process. Institutions and civil society should help motivate people to become more involved. Since almost everything that happens on the Internet in Colombia plays out on social networks, there is a huge dependence on global players like Facebook. More diversity—in terms of both local digital content and platforms—could enrich the discourse in society. More independence from tech firms when organizing digital education would be a plus.

Protect women from hate speech and cyberbullying
It is a big problem when certain social groups withdraw from the discussion on social networks because they are exposed to hate speech and threats. Politicians and civil society need to recognize that women in Colombia are disproportionately affected by this, and introduce measures to combat abusive behavior online. Greater Efforts are also needed to involve women more in online discourses and technology.

Raising awareness about privacy on the Internet
Personal data is published in such way that it can lead to negative consequences such as physical attacks, especially on journalists and activists. In this area, there is a need for more education and sensitization as to where the dangers lie and how they can be counteracted.

Innovation: How the tech sector is encouraged to become a driving force in the Colombian economy

The Colombian government invests a great deal to encourage innovation. Despite the creation of tech centers, tax incentives and direct support for developers, the growing start-up scene still faces an uphill battle.

Summary

– Innovation is seen as an important policy goal
– Royalties from mineral exploitation boost the tech scene
– The development of innovative apps has a high priority
– Founding a startup is nonetheless still quite complicated

Innovation

low
moderate
advanced
high

The overall Level of Digital Participation for Innovation: **advanced**

In a rundown neighborhood in Colombia's second city, Medellín, lies what political leaders hope is the key to the future. From the outside, it resembles an enormous, crumpled shipping container burnt red by the sun. Inside are the offices of one of the biggest tech incubators in Latin America. Founded in 2009, Ruta N aims to bring together expertise from academia, the public sector, and the private sector. Their ambition, explains communications director Sergio Naranjo, is to build innovative companies.

The sprawling campus offers a co-working area, conference facilities, and permanent office space. Not only do they try to motivate and train local university graduates to start their own tech business, they also want to attract large companies from abroad, to set up base here. As of February 2019, more than 150 companies from two dozen countries operate from the Ruta N complex, accounting for more than 2,500 jobs, according to the center.

Calling Ruta N "Colombia's Silicon Valley," might be an exaggeration, but it nonetheless points to the significance and hope invested in it. "By 2021, innovation will be the driving force of the economy and welfare of the city, based on a world-class [tech] ecosystem," is how the innovation center describes its vision.

Innovation as a path toward the future

"Innovation is essential to tackling the challenges Colombia faces," according to an OECD Review of Innovation Policy report from 2014 (OECD 2014). It argues that, "the potential significance of innovation for Colombia's socioeconomic transition has been acknowledged and given prominence in the National Development Plan 2010–14" and mentions "a noteworthy increase" in resources for science, technology and innovation after the distribution regime for mineral exploitation royal-

ties was restructured. The government has made significant investments in tech, including through tax incentives (Wood 2017). President Iván Duque, in office since 2018, has promised a five-year income tax exemption for new entrepreneurs in the creative sector—the so-called "orange economy (Wade 2018)."

There are other signs that Colombia is making progress. In the Global Innovation Index 2018 (Cornell University, INSEAD, and WIPO 2018) report, the country was ranked 63rd and was classified, for the first time, as an "innovation achiever," meaning a country that "performed at least 10 percent above peers in their income group."

> **❝ Regulation is slowing down the development of the digital economy.**
>
> **Camila Pérez,** Fedesarrollo

Apps for everything and everyone

For the Colombian economy, startups are of growing importance. Many of them use co-working spaces, which have emerged not only in Medellín, but also in the capital Bogotá and other major cities. "The co-working community has grown quite a lot," says Juan Morales from HubBOG, a "Campus for Start-ups," located in the north of the capital. "About 5 years ago we had less than ten co-working spaces in the whole city, now there are several in every barrio." They vary in size and organizational structure, from small living rooms to the offshoots of international companies such as WeWork.

HubBOG works with the Ministry of Communication's Apps.co initiative, which aims to "help transform ideas into sustainable businesses." According to their figures, Apps.co has helped 2,175 teams and companies since its creation in 2012, and claims

to have created the "largest digital entrepreneurship community in Colombia and a benchmark in Latin America." In "boot camps," participants collaborate to find digital solutions for problems in their regions. By the end of the initiative, the hope is that they will have some kind of ICT business, ideally using mobile applications.

Successful apps are invited to join the "Team Startup Colombia" initiative and receive further support. The most famous example is "Rappi" (Moed 2018), a startup that delivers food or other goods —even cash— using freelance bike messengers, who connected through the app. Since its founding in 2015, the company has grown rapidly, first in Bogotá and other Colombian cities, and then abroad. Having reached a $1 billion valuation in its 2018 investment round, it became Colombia's first unicorn company (Clark 2018).

Not only has the app significantly changed consumer behavior, it's also created employment opportunities for people, often migrants, who previously struggled to find regular work. Tappsi, a taxi service, is another widely used app, which owes much of its success to changing social habits. By incorporating several safety features, they are better able to respond to the needs of Colombian customers. Tappsi, which has been supported by from incubators and accelerators, has since merged with the Easy Taxi app from Brazil (Hastings 2018), which claims to be the most downloaded taxi app in the world.

Still a difficult environment

On the one hand, Colombia has become a very attractive market for global tech firms to introduce new products. For example, it is the first country in which Facebook rolled out its new dating feature (Constine 2018) to test out how it would be received. On the other hand, there are strong headwinds facing traditional companies that fear for their bottom lines. Due to a recent fiscal reform, platforms like Uber, Netflix or Spotify, have to pay 19 % VAT (Becerra Elejalde 2018). As a consequence, Uber—which operates in a legal grey zone in Colombia—has raised its prices by 7 % (El Tiempo 2018).

As far as national start-ups are concerned, local conditions are geared more toward traditional companies. Economist Camila Pérez from Fedesarrollo, a thinktank, believes that it is therefore not that easy to launch a start-up in Colombia. Founding a company requires navigating a complex bureaucratic process and there are few angel investors to help with financing. Until recently, crowdfunding was not an option since collecting money from a large number of people was illegal— to clamp down on pyramid schemes.

"Now [crowdfunding] is possible, but the environment is still not optimal for startups," Pérez says. It is also very difficult to find the right staff—including skilled app developers. "People coming from the universities don't really have the capabilities that start-ups need."

Recommendations

More cooperation between actors
It is important for the development of the Colombian tech sector that the various actors—government, universities, companies—deepen their cooperation. In particular, university education in the software programming must be improved to meet current requirements.

More open source approaches
When it comes to technological development, especially in the app sector, open source approaches must be further encouraged. On the one hand, this will enable the participation of less resource-rich actors; on the other hand it will guarantee high data protection and data security standards.

More sustainability in citizen participation
In terms of open data and citizen participation, positive approaches exist in Colombia. For example, "MiMedellín," a platform for open innovation and citizen collaboration, was set up in 2013 and won the Inter-American Award for Innovation for Effective Public Management by the Organization of American States. But today, the site lies dormant. Such initiatives should be made permanent in order for them to have a lasting impact.

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