CivicLytics:

COVID-19 and the Citizenry: the first 120 days.

Findings using Artificial Intelligence to understand the trends among citizens and crisis exit strategies.

BID

Powered by
citibeats

WiConnect

BID · BID | Invest · BID | LAB

INDEX

SECTION I: The first 120 days of the pandemic What worried the people of Latin America and the Caribbean the most?

Case studies show that knowing the needs of citizens is an indispensable condition for creating innovations that respond to those needs.

Someone said "perception is reality" and hundreds of thousands of cases confirm how the perception of a subject creates realities. For example, during the beginning of the COVID-19 emergency, the perception of food insecurity caused the emptying of supermarkets in different countries of the world.

30% of the total conversation at the beginning focused on topics related to the pandemic. After the initial wave, the crisis continues to having a strong affect but becomes diversified into different categories.

As such, we classify the findings as follows:

The principle data sources for CivicLytics are[1]:

Twitter

Citizen contributions on the CivicLytics website

Comments on the web, forums and blogs

Representativeness and methodology:
We use Artificial Intelligence (AI) to analyze and process millions of open data that we then structure to meet people's needs. We do this by listening to people's perceptions and concerns. To learn more about the data source, methodology and the representativeness of the data, visit:
https://bidciviclytics.citibeats.com/

Alert

Trend

Comparison

Central American countries

Socio-sanitary impact of the closure of the borders between Nicaragua and Costa Rica
pg. 11

Gender gap marked by social isolation
pg 11

Haití feels forgotten and asks and businesses run by black for saving of resources
pg 11

Andean countires

The flexibility of in Ecuador generated peaks of doubts
pg. 9

The Andean economies reinvented themselves after 3 weeks at home
pg 9

Fear of contagion in urban markets in Peru
pg 9

Caribbean countries

After the reduction in the number of infections, concerns are diversifying
pg. 5

BLM focuses criticisms on the inequalitiy in the police
pg 5

To support local business and businesses run by black people
pg 5

Southern Cone countries

Confinement triggers mental health problems
pg. 7

Neighboring countries with different economic concerns
pg 7

Change of mindset towards individual responsibility by Brazilians
pg 7

At the Caribbean Regional Level

In the Bahamas, Barbados, Guyana, Jamaica, Surinam and Trinidad & Tobago the three most significant topics were:

1. After the reduction in the number of infections, concerns diversify

2. From supporting local businesses to supporting black-owned businesses

3. The Black Lives Matter movement focused criticism onto the inequalities in the police force

1. After the reduction in the number of infections, concerns diversify

Type: **trend** ⬆

Theme: **transversal**
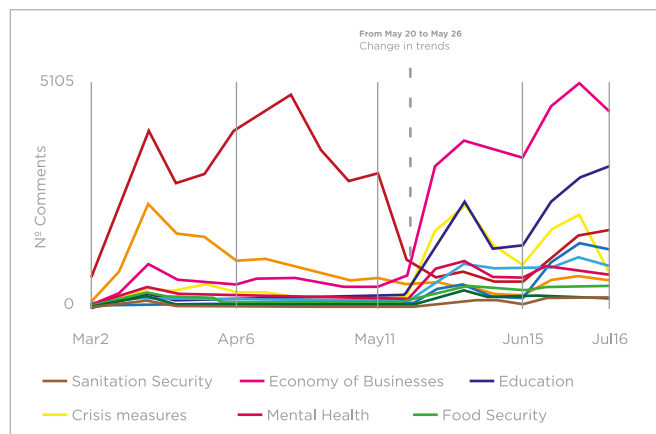
Sentiment: **empowerment**

Time frame: **2/03/2020 - 12/07/2020**

The Caribbean countries constitute an interesting model of the sudden change in the types of concerns that occurs when the number of infected reaches 0.

During the last week of May, health concerns dropped considerably, giving rise to a great diversity of topics - such as concerns about the economic security of every island's businesses, and education.

Later, other countries - such as Chile, Uruguay, Honduras, Colombia and Panama - followed a similar trend.

Trends diverge after the reduction of cases. Evolution of the themes in Caribbean countries (CCB).

2. From supporting local businesses to supporting black-owned businesses

Type: **trend** ⬆

Theme: **economic security of households**

Sentiment: **empowerment**

Time frame: **1/04/2020 - 14/07/2020**

Throughout the quarantine, many people had been encouraging their fellow citizens to support neighborhood businesses, in order to boost the local economy.

Starting in June, two narratives merged and multiplied their strength. The local population comments that the large chains do not influence the development of their island, plus are owned by white businessmen.

🐦 "Hypocrites on this app wii, i sure allyuh eh support a black business since d country reopen that aint ya friend" (29/6/2020) Trinidad & Tobago.

🐦 "We all must support local... now more than ever" (12/04/2020) Jamaica.

3. The Black Lives Matter movement focused criticism onto the inequalities in the police force

Type: **alert** 🔔

Theme: **crisis measures**

Sentiment: **trust**

Time Frame: **1/05/2020 - 14/07/2020**

The Black Lives Matter campaign had a great impact on the media throughout Latin America and the Caribbean. The main spikes of conversation were observed in Chile, Colombia, Costa Rica and all the Caribbean countries. BLM made it possible to expose inequalities in Latin American societies.

Since the murder of George Floyd, demands for police accountability have multiplied. This lack of trust is complicating the dissemination of preventive advice, contagion control, and the gradual reopening of economies.

Criticisms of the police multiply. Volume of comments related to the police in Caribbean countries (CCB).
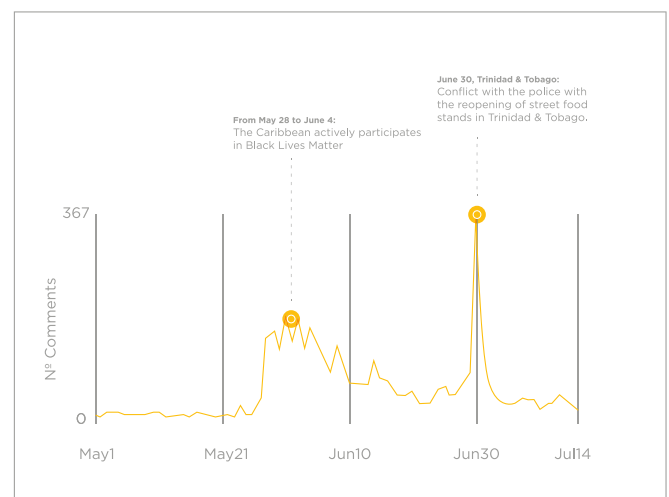
At the Southern Cone regional level:

In Argentina, Brazil, Chile, Paraguay and Uruguay, the three most significant issues were:

1. Confinement triggers mental health problems

2. Neighboring countries with different economic concerns

3. Change of mentality towards individual responsibility of Brazilians

1. Confinement triggers mental health problems Southern Cone countries

Type: **alert**
Theme: **mental health**
Sentiment: **dignity**
Time period: **2/03/2020 - 30/04/2020**

The CSC region is the leader for mental health concerns.
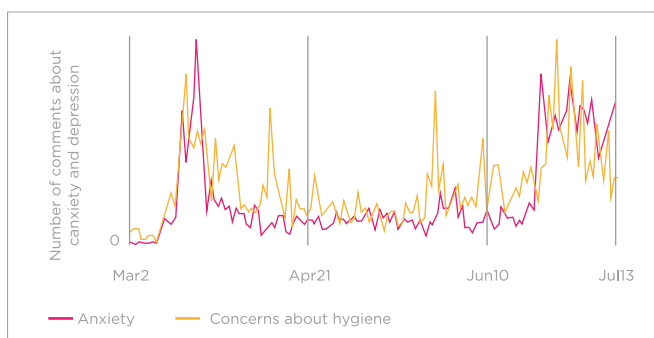
Concerns for mental health.
Proportion of comments related to mental health, relative to the other topics 13/7/2020–20/7/2020.

The mental health of the Southern Cone's citizens has been hit hard by the pandemic. Sudden peaks of anxiety were detected at the time the quarantine measures were decreed. A second anxiety spike occurred in late June, when mobility restrictions were lowered. Citizens express fear of seeing other people or difficulty being in a group.

Comments related to depression showed constant growth during the months of strict confinement. However, an upturn in testimonies about depression has also been noted as confinement eases.

Anxiety and depression multiply at different stages of the quarantine. Volume of comments. Southern Cone Aggregate (CSC).

Mental health is the topic that generates the largest gender gap, according to the gender profiling carried out by CivicLytics for the data of May 2020. On average in the Southern Cone, women express their mental health concerns 169% more than men.

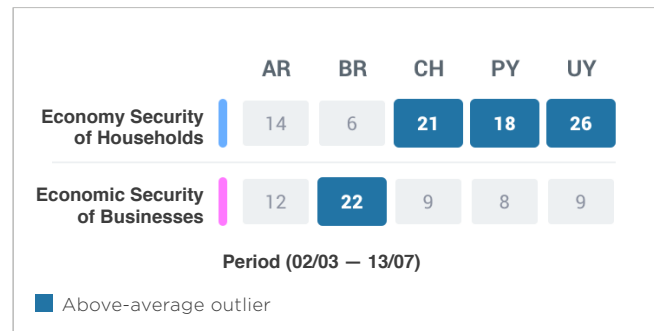## 2. Neighboring countries with different economic concerns

Type: **comparison**
Themes: **Economic Security of Homes and Economic Security of Companies**
Sentiment: **dignity**
Time period: **2/03/2020 - 13/07/2020**

Economic priorities in the Southern Cone Proportion of comments related to mental health, relative to the other topics.

	AR	BR	CH	PY	UY
Economy Security of Households	14	6	21	18	26
Economic Security of Businesses	12	22	9	8	9

Period (02/03 — 13/07)

■ Above-average outlier

People speak in different ways: in Chile, the withdrawal of private pension funds (AFP) generates doubts and debate; in Paraguay, they speak of the lack of solvency and financial exclusion; in Uruguay, about lack of employment and internships for young people; in Argentina, concern about debt and inflation; and in Brazil, the debate on privileging the prevention of contagions or the national economy stands out more than in other countries.

3. Change of mentality towards individual responsibility of Brazilians

Type: **trend**
Themes: **Health Security and New Normality**
Sentiment: **empowerment**
Time period: **30/03/2020 - 13/07/2020**

June 24 was a turning point in Brazil. Brazilian public opinion began to greatly express individual responsibility in managing the pandemic, to the detriment of concerns about the management of the health system.

Individual responsibility increases.
Relative evolution of comments in Brazil.
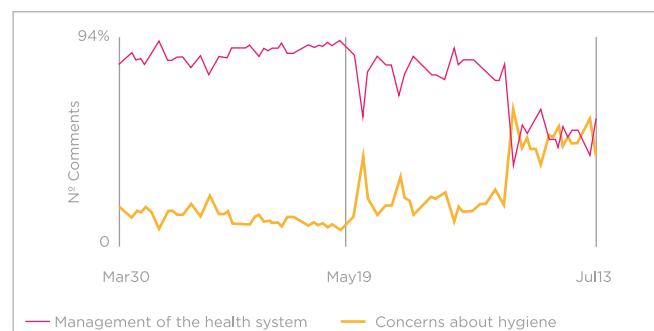
At the Andean regional level

In Bolivia, Colombia, Ecuador, Peru and Venezuela the three most significant themes were:

1. The flexibility in Ecuador generated peaks of doubt

2. Fear of contagion in urban markets in Peru

3. The Andean economies reinvented themselves after 3 weeks at home

1. The flexibility in Ecuador generated peaks of doubt

Type: **trend** ⬆
Theme: **new normal**
Sentiment: **visibility**
Time period: **1/06/2020 - 13/07/2020**

The Ecuadorian Government has been making confinement more flexible through levels called stoplights (red, yellow, green), according to the contagion statistics of each region. The easing of restrictions raised doubts about how to interact with others in a legal and responsible way.

Peaks of specific doubts
Absolute evolution of comments in Ecuador.
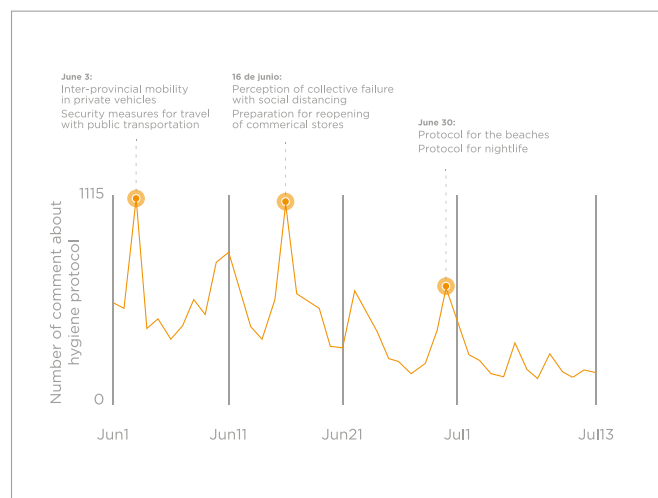
2. Fear of contagion in the urban markets of Peru

Type: **trend** ⬆
Theme: **infrastructure**
Sentiment: **dignity**
Time period: **14/04/2020 - 13/05/2020**

Citizens of the region criticize the lack of sanitation in urban markets.

These fears have prompted a change in consumer habits in the region. A change in food consumption habits is expected for supermarkets and small establishments.

Citizen contribution on the CivicLytics website:
What worries you most in this crisis?

💬 "How to get all safe food without contagion and how to change the order for biosecurity. [...] There are many people who work in primary needs activities who do not have protective equipment because there is none in the local market, they are sold over the Internet but are excessively expensive" (04/13/2020) Peru.

🐦 "When they go to buy potatoes, lettuce, at the market, they will get their COVID-19 as a freebie" (04/29/2020) Peru.

3. The Andean economies reinvented themselves after 3 weeks at home

Type: **trend** ⬆
Themes: **new normal and economic security for families**
Sentiment: **dignity**
Time period: **2/03/2020 - 30/04/2020**

In the Andean region, the economic impact of confinement was noticeable. A few days after the COVID-19 quarantine declarations, thousands of testimonies of extreme poverty and hunger began to emerge between March 16 and April 1.

After 3 weeks of quarantine, families again leave comments about families' economy and hygiene protocol. Relative evolution of comments in Andean region (CAN).
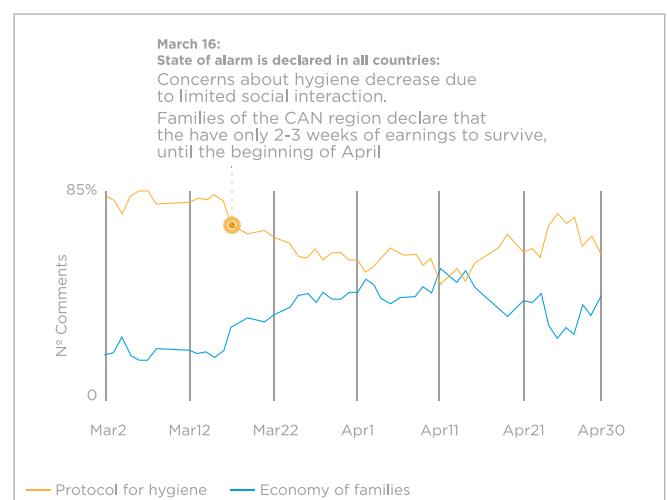
🐦 "I don't want to be pessimistic but realistic, here in Bogotá informal work is approximately 48.2%, that is to say they live from day to day... They think we can endure 2 weeks without income... We will have to choose between coronavirus or hunger." (3/28/2020, Colombia).

11/04 al 14/04: After 3 weeks, the streets were full of workers again.

🐦 "I see scenarios like this (where social distancing is not practiced) once a week, when I go out to stock up. Days ago I accepted that this will last a long time, simply because people do not listen. There is no discipline or order. What impotence." (04/18/2020) Ecuador.

Citizen contribution on the CivicLytics website:
What worries you most in this crisis?

💬 "Lack of income forces citizens to leave home, often without protection, exposing themselves to contagion and / or becoming a potential transmitter of the virus" (06/25/2020) Ecuador.

At the Central American and Isthmus regional level

In Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Mexico, Panama, the Dominican Republic and Haiti – the three most significant topics were:

1. The closing of borders between Nicaragua-Costa Rica causes havoc

2. Gender gap marked by social isolation

3. Cash transfers could prevent famine

1. The closing of borders between Nicaragua-Costa Rica causes havoc

Type: **comparison**
Themes: **economic security of households and health security**
Sentiment: **visibility**
Time period: **1/03/2020 - 16/07/2020**

On May 18, the border between these two countries was definitively closed. Immediately afterwards, the conversations in both countries changed:

- After the closure of the border, health concerns in Costa Rica went down by 5% because many Nicaraguan transporters or migrants were the only ones that tested positive for COVID-19 once they crossed the border. However, the border regions of Guanacaste, Alajuela and Heredia experienced an increase of 7% compared to the national average due to the accumulations of migrants trying to return to Nicaragua, and the health consequences caused by these assemblies.

- In Nicaragua, the main impact was noted in concerns regarding the economic security of households. The most affected was Chontales with a 13% increased compared to the national average, due to massive layoffs incurred from its lack of commercial connection with the rest of Central America.

Economic consequences and sanitary overcrowding. Proportion of comments by subject, by region and country.
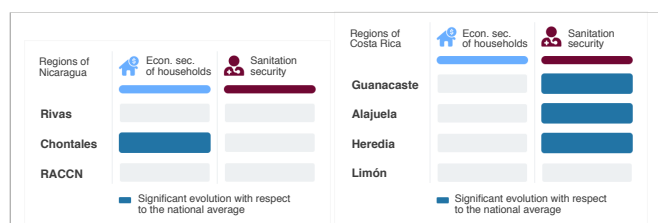
2. Gender gap marked by social isolation

Type: **comparison**
Theme: **transversal**
Sentiment: **visibility**
Time period: **1/05/2020 - 31/05/2020**

According to the gender profiling carried out by CivicLytics with the data from May 2020, the conversation that reflects the greatest gender gap in Central America is about hygiene.

Women speak of hygiene measures and social isolation 133% than men. Costa Rica shows the largest gender gap in this regard, since hygiene represents 12% of the conversations of Costa Rican female citizens, versus 8% of male Costa Rican citizens.

Women express 2 main concerns.

- Confinement increases the risk of gender-based violence for many women.

- Men respect isolation less than women: there is the impression that the streets are still dominated by men, much more than before the pandemic.

🐦 "In fact, yes we look at the beginning of the Pandemic, at one point the number of Men far exceeded that of women, which made us think that men (some) have worse hygiene habits than women." (04/20/2020)

Citizen contribution on the CivicLytics website: What worries you most in this crisis?

🔴 "Taking the dog out to relieve itself when there are only two women in the home and there are restrictions on days when no woman can go out. Then, having to ask for help from third parties by notifying the situation of the home and putting ourselves at risk." (07/21/2020) Peru.

3. Cash transfers could prevent famine

Type: **trend** ⬆
Theme: **infrastructure**
Sentiment: **trust**
Time period: **2/03/2020 - 16/08/2020**

The summer hit Central America with a peak of poverty, followed by a peak of hunger a few weeks later.

The countries of the region implemented ambitious food distribution policies, which were not enough to prevent famine in the region.

The only countries that did not express high levels of health insecurity in the social networks were Mexico, El Salvador and Costa Rica. What these countries have in common is that they were the ones that invested the most in cash transfers and delayed payment of supplies for the most disadvantaged families.

Peaks in food insecurity. Analysis based on volumes of food safety comments, relative to other topics between June and August.

- 🟢 Peak of food insecurity
- 🔵 Without peaks of food insecurity

SECTION II. Early alerts and detection of localized needs: 3 serious issues put on the table by citizensa

Anticipation of famine in Venezuela and alerts in La Guajira in Colombia

On April 12, 2020, CivicLytics detected a 350% increase in famine testimonies in Venezuela shortly after the announcement of a 30-day quarantine. 14 days later the international press reported on this emergency situation. The comments bear witness to malnutrition, vendors announcing that they have no more corn and citizens reporting empty shelves in the neighborhood supermarket.

Lack of running water in cities

Since the beginning of the pandemic, multiple reports about the lack of running water have been detected in real time in different neighborhoods the region's most important cities. This situation makes hygiene and well-being difficult during quarantine.

Latest alerts for the lack of running water.

🐦 "Without water calzada la viga colonia heroes de churubusco in full pandemic or how to take hygiene measures, without water is impossible"(7/16/2020) Iztapalapa, CDMX.

San Salvador

💬 "Excuse me, gentlemen of Anda, we have called 915 requesting the restoration of water service we have been without water for 3 days in the San Antonio Barrio Santa Anita neighborhood, or send pipes we need water to work and wash our hands constantly because of the pandemic" (7/13/2020) San Salvador.

Escalation of problems among Bolivian carriers

In July, an emerging unease was detected among Bolivian transporters due to the differences in the health service conditions given depending on the city. They present concrete demands, such as health insurance and free medical care for relatives. This discontent, which has been included in the theme of Health Security, could spread to other sectors, as a large part of the public opinion supported it on Twitter.

Anticipation of famine in Venezuela. Volume of comments related to hunger.
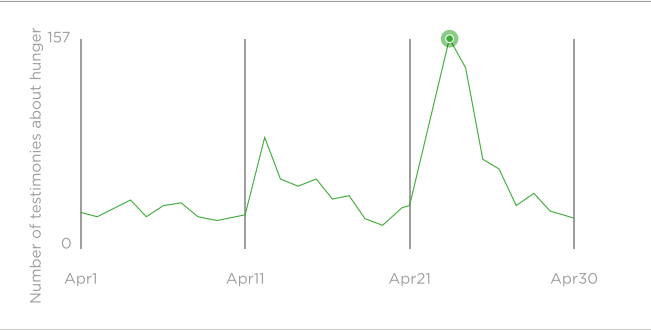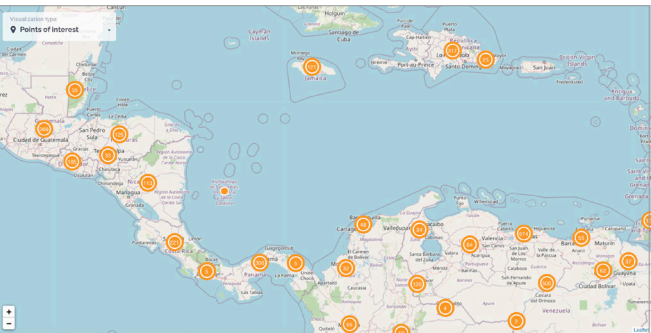

Citizen contributions on the CivicLytics website: What worries you most in this crisis?

💬 "Exhorbitant increase in the price of products, speculation and insecurity about commercial stores to resupply these products"(04/01/2020) Venezuela.

Lack of running water in cities
Civic mentions of hygiene challenges, geolocated from text.

From July 14 to 24, 2020

Sanitary Security grew 275% in relation to the transportation sector.

↑ **275%**
volume

🐦 "They hurt transporters whose profitability was reduced to 25% because of the restrictions on distance, hours and digits authorized x day. But the private companies lost nothing. Reviewing telecom, cable, airlines, special schools, banks, private health." (6/11/2020) Bolivia.

SECTION III. Scenarios for exiting the crisis: 5 initial conclusions

1. **Today's citizens are putting tomorrow's political agenda on the table.** The evolution of citizens' concerns reflects how, during the first weeks of the pandemic, the conversation was predominantly centered around the collapse of the healthcare system. A few weeks later, this conversation became fragmented into various social concerns, such as mental health and community hygiene.

2. **Sustainable decisions are not made by responding to perceptions, but by structuring needs.** Health emergency alerts (Section II) and innovations in the technology sector (urban mobility, tourism) are characterized by designing solutions to real needs, rather than responding to perceptions. These perceptions hide unmet needs, which must be codified. This last step is achieved thanks to the integration of Human Intelligence (HI) methodologies combined with Artificial Intelligence (AI).

3. **Perception generates reality. Why is it relevant to recognize perceptions in time?** People perceived a shortage of food. This perception was reported massively and instantly by social networks, which caused the emptying of supermarkets. Understanding these information networks, also generated in times of emergency, helps to contain the negative impacts of this perception. These trends can be very useful for measuring the impact of public policies, identifying needs, narratives and opportunities. CivicLytics, as a model of ethical Artificial Intelligence, can identify flourishing productive sectors. We saw an example of this in Peru, where a trend in a change in food consumption habits is identified as a result of the sanitary conditions of urban markets (section I).

4. **Citizen changes do not come from the media, but from structural changes.** It is not enough to program the theme detector of a conversation; the situation requires one more step. In the case of Black Lives Matter, thanks to CiviClytiCs, we saw that throughout Latin America and the Caribbean there were testimonies of frustration due to an event that occurred during the confinement that many people considered racist. Many of these frustrations, which were developing in an "invisible" way, needed a great media event to bring it to light.

   a. Before the COVID-19 crisis, we witnessed people's ability to rally behind a hashtag in record time, putting topics on the public agenda like #NiUnaMenos and #MeToo. The so-called "parapandemic" of domestic violence arose with unprecedented strength since the early days of the COVID-19 Observatory. Likewise, the massive demonstrations of 2019 had a very high level of virtual participation.

   b. The citizen's role also achieves funding opportunities, and we saw with direct transfers of more than 5.3 billion dollars in investments such as crowdfunding (Kickstarter).

   c. The advancement of citizen participation with Swarm Intelligence systems, which allow legislating or designing space systems in a decentralized manner (WikiLegis and NASA, respectively) demonstrate the growing role of people.

   d. What we would expect to be an evolutionary process that would take years, accelerated in a few months. The data collected by CivicLytics was contrasted with structured reports (surveys, macroeconomic analysis). The coincidences of both approaches were clear. An approach that combines data with a citizen perspective can explain the so-called "market failures" '. Furthermore, biases associated with surveys are avoided because unstructured data is collected without the need to ask questions.

5. **Big data (dis) connects us through segmentation: The virtual universe segments citizens in indecipherable ways (for now):** There are social problems that are affect a certain sociodemographic group that another group in the same territory totally ignores. The example of Black Lives Matter (section I) shows how issues in one country spread to other parts of the world, hitting the nerve of social beliefs that appear at first glance as accepted issues. By processing massive indistinct data, we can see reality from a more inclusive perspective.

ADDENDUM I.
Knowing what concerns citizens helps us to be one step ahead

Case studies show that knowing the needs of citizens is an indispensable condition for generating innovative solutions that respond to those needs. To structure needs, it is necessary to know people's concerns and the perceptions of those same individuals with respect to reality. Someone said "perception is reality" and hundreds of thousands of cases show how the perception of a subject creates realities.

By establishing the CivicLytics citizen observatory as a public good, the IDB Group is helping governments, the private sector, and citizens to learn about real-time perceptions and concerns that people massively dump on the Internet. The generation of this data gives the information needed to adjust approaches that will improve efficiency in the development of public policies, private sector projects, and interventions by citizens and / or civil society organizations in the territory.

We analyze millions of open data in the form of thousands of comments that people spontaneously share on the Internet. By adding AI with human intelligence, we can better understand the avalanche of perceptions and concerns combined with what lies behind those claims in terms of dignity, trust, security, and visibility.

The objective of this report is to share the knowledge generated with CivicLytics and show the kind of actionable information that can be generated from citizen listening and real-time analysis of citizen opinions, and how that can drive a more responsive society.

Get to know CivicLytics

Visit **bidciviclytics.citibeats.com** to read more about the data and methods behind this report - and to support your own work.

We work in countries with Internet penetration between 55% and 93%, processing and analyzing millions of data monthly, in real time. To understand the extent and scope of the representativeness of this information, **click here.**

Categories of perceptions and concerns expressed by citizens of Latin America and the Caribbean on the Internet regarding the COVID-19 pandemic:

1 Crisis Measures
2 Food security
3 Household economy
4 Business economy
5 Health system
6 New normal
7 Future of work
8 Education
9 Mental health
10 Vulnerable people
11 Environment
12 Citizen initiatives
13 Fake news

ADDENDUM II.
Ethical AI for the development of the region

CivicLytics:
Connecting the development of Latin America and the Caribbean through the ethical management of data

The CivicLytics Citizen Observatory, through the use of AI to analyze Social Big Data, seeks to better understand the needs of citizens in real time and to reflect the dignity, trust, security and visibility of people.

In the current context of a pandemic, which has unleashed a global health and economic crisis, listening to and better understanding the public has invaluable value for the decision-making process of governments, development agencies and organizations, companies and citizens.

CivicLytics applies AI to process, analyze and structure the large amount of data that is produced in this context, and human intelligence to interpret and draw conclusions about the needs of citizens.

Ethical Artificial Intelligence

When artificial intelligence is used to promote social good and through the right methods, AI can be considered ethical.

The technology of Citibeats, a start-up partner of the CivicLytics project, is aligned with this vision.

1. **Respect for privacy:** All analyzed data is extracted from public and open sources (social networks, blogs, digital press, websites) or from private sources that have permission to use this data.

2. **Interpretation of collective data (not individual):** Citibeats analyzes collective data and, therefore, works with aggregate data. By working only with a large amount of anonymous data and collective opinions, it never detects the opinions of specific individuals. People are anonymised and included in groups and global trends that are analyzed, so their objective is not to detect individual cases.

3. **Identification of deviations:** The platform identifies discrepancies caused by sociodemographic factors, such as gender, age, etc.

4. **Use for positive social impact:** Citibeats puts the platform at the service of projects with a positive impact on people's lives.

5. **Non-partisan application:** The platform never works for ideas, parties or political movements, but works for administrations and institutions, NGOs, non-profit entities and other decision makers.

To get more information, visit the official site: https://bidciviclytics.citibeats.com/

Here you can do the following:

Browse the data

Use the information in this report and on the public website to support your own work. Citations must refer to the Inter-American Development Bank 2020, CivicLytics.

Add your voice

By sharing your concerns, opinions and perceptions on the internet, you make it easier for us to understand how COVID-19 is affecting your life and thus contribute to creating solutions together with millions of people.

Download the data

Create solutions from informed decisions based on what citizens think.

To connect with the IDB Civil Society team, visit: https://www.iadb.org/es/sociedad-civil/idb-civil-society-team