



17th World Telecommunications/ICT Indicators Symposium

PARTNERSHIP ON MEASURING ICT FOR DEVELOPMENT
SESSION: A THEMATIC LIST OF ICT INDICATORS FOR THE
SDG

Alejandro Patiño, ECLAC
December 3, 2020

CONTENT

- Challenges presented by the pandemic for data collection
- Recommendations to guarantee the quality of the statistics given the change in the collection methodology

- Work on data innovation and digital economy
- Trends observed through new sources of information
- Challenges ahead in data innovation



UNITED NATIONS

ECLAC

Challenges presented by the pandemic for data collection

- Since the health emergency arising from COVID-19 pandemic, some national statistical offices (NSOs) have had to interrupt abruptly the collection of primary information, including household surveys.
- The statistical operations most affected by the situation were, surveys, followed by administrative records and censuses.
- With regard to household surveys, most countries said that information collection would be postponed to later in the year in most cases.
- NSOs are carrying out surveys over the telephone or the Internet. Change of collection methodology requires some adjustments.



UNITED NATIONS

ECLAC

Recommendations made by the Statistics Division of ECLAC

- The publication of official statistics from household surveys be based on the probabilistic selection of the sample and not on predictive models.
- Set up a probabilistic monitoring panel, based on the most recent months of face-to-face collection, to conduct telephone surveys, keeping as reference population the one contained in the NSO master sampling frame.
- In cases where response rates were low, it was recommended to publish the statistics at the national level, avoiding the usual disaggregations, making the information collection period explicit.
- Use selection and coverage bias correction models that allow adjusting the expansion factors taking into account the auxiliary information available in the monitoring panel.



UNITED NATIONS

ECLAC

COVID-19 REPORTS

Recommendations for the publication of official statistics from household surveys in the context of the coronavirus disease (COVID-19) pandemic

April, 2020

Summary

In the context of the global COVID-19 pandemic, ECLAC is preparing a series of short publications with relevant policy recommendations. A number of recommendations are made in this note on gathering labour market information through household surveys, paying particular attention to the sample designs required for this purpose.

A. Introduction

Since the health emergency arising from the global COVID-19 pandemic, which has led most of the countries of the region to declare states of emergency, national statistical offices (NSOs) have had to interrupt abruptly the collection of primary information as part of many of their statistical operations, including household surveys. This note describes possible scenarios for the collection and analysis of household survey data and provides a set of recommendations regarding the capture, publication and dissemination of official statistics from those surveys, in the context of the international situation caused by the COVID-19 pandemic.

In those countries that have declared states of emergency, in order to stop the spread of the disease and protect those people most vulnerable to it, governments have taken difficult decisions that have affected society and the normal functioning of government institutions, educational entities, industry, transportation and commercial establishments, among others. In some cases, the general public has begun to collaborate with voluntary quarantines, but in light of the rapid spread of the disease, governments have had to impose curfews, movement restrictions and compulsory quarantines, among other health measures, and remote learning and working methodologies have been implemented or developed.

In view of this situation, the Statistics Division of ECLAC sent out a short questionnaire to the NSOs and central banks of Latin America and the Caribbean, to learn about the effects that the health emergency was having on the functioning of statistical institutions. Responses from 20 countries indicated that, as at 20 March, they had all declared some form of health emergency as a result of COVID-19. The statistical operations most affected by the situation were, surveys, followed by administrative records and censuses. With regard to household surveys, most respondents said that information collection would be postponed to later in the year in most cases. The main information collection difficulties are movement restrictions and the closure of establishments.

Summary

A. Introduction

B. Recommendations for March 2020

C. Recommendations for the following months

D. Conclusions

1

https://repositorio.cepal.org/bitstream/handle/11362/45382/S2000273_en.pdf?sequence=4&isAllowed=y

COVID-19 REPORTS

Recommendations for eliminating selection bias in household surveys during the coronavirus disease (COVID-19) pandemic

May 2020

Summary

In the context of the global coronavirus disease (COVID-19) pandemic, the Economic Commission for Latin America and the Caribbean (ECLAC) is preparing a series of short publications with relevant policy recommendations. A number of recommendations are made in this note to address bias problems that may arise in household surveys carried out during this exceptional period, as a complement to the suggestions made in a previous note on the sample designs for this type of survey.

Introduction

In an attempt to slow the spread of COVID-19, countries have imposed movement restrictions on people, which have prevented the face-to-face collection of information for household surveys. In order to address this issue and to continue producing relevant and timely official statistics, some national statistical offices (NSOs) have resorted to conducting surveys by telephone or via the Internet. The document "Recommendations for the publication of official statistics from household surveys in the context of the coronavirus disease (COVID-19) pandemic" contains some possible lines of action for drawing the sample of households to participate in the surveys, in particular using a selected panel from a recent period for which the telephone contact information is available (ECLAC, 2020). This note complements the recommendations made in that document, by proposing two approaches to minimize the bias generated by non-response that will be encountered when carrying out surveys by telephone. In addition, a third approach is proposed for those instances in which it is difficult to obtain auxiliary information.

A. Detecting bias

Changing the household survey data collection modality from face-to-face interviews to a telephone- or web-based modality may have unintended consequences and, in particular, may generate biases (of selection, coverage and non-response) among survey respondents. In a scenario where a sample of households from a previous period is being used (hereinafter the "original sample") and where every effort is being made to contact those selected households, the process is inevitably exposed to the following difficulties:

- Not all the households in the original sample provided their telephone contact information.
- Some households provided their contact information, but at the time of the interview they do not live at the selected address.
- Some households provided their contact information, but they have since changed their contact telephone number.
- Not all households that provided their contact information are willing to answer the survey questionnaire.

Summary

Introduction

A. Detecting bias

B. Propensity score adjustment

C. Two-stage calibration method

D. Poststratification based on multilevel models

E. Conclusions

Bibliography

1

https://repositorio.cepal.org/bitstream/handle/11362/45553/S2000315_en.pdf?sequence=1&isAllowed=y



UNITED NATIONS

ECLAC

WHY WE NEED TO INNOVATE IN MEASURING THE DIGITAL ECONOMY?

- Definition / limits: the definitions of “digital economy” are various.
- Compounded by continuous innovation, data collection is always behind technological change.
- Many digitally enabled economic activities are not obvious. They can be intermediate services between companies or between consumers.
- The pandemic also presented a greater need for data to identify trends

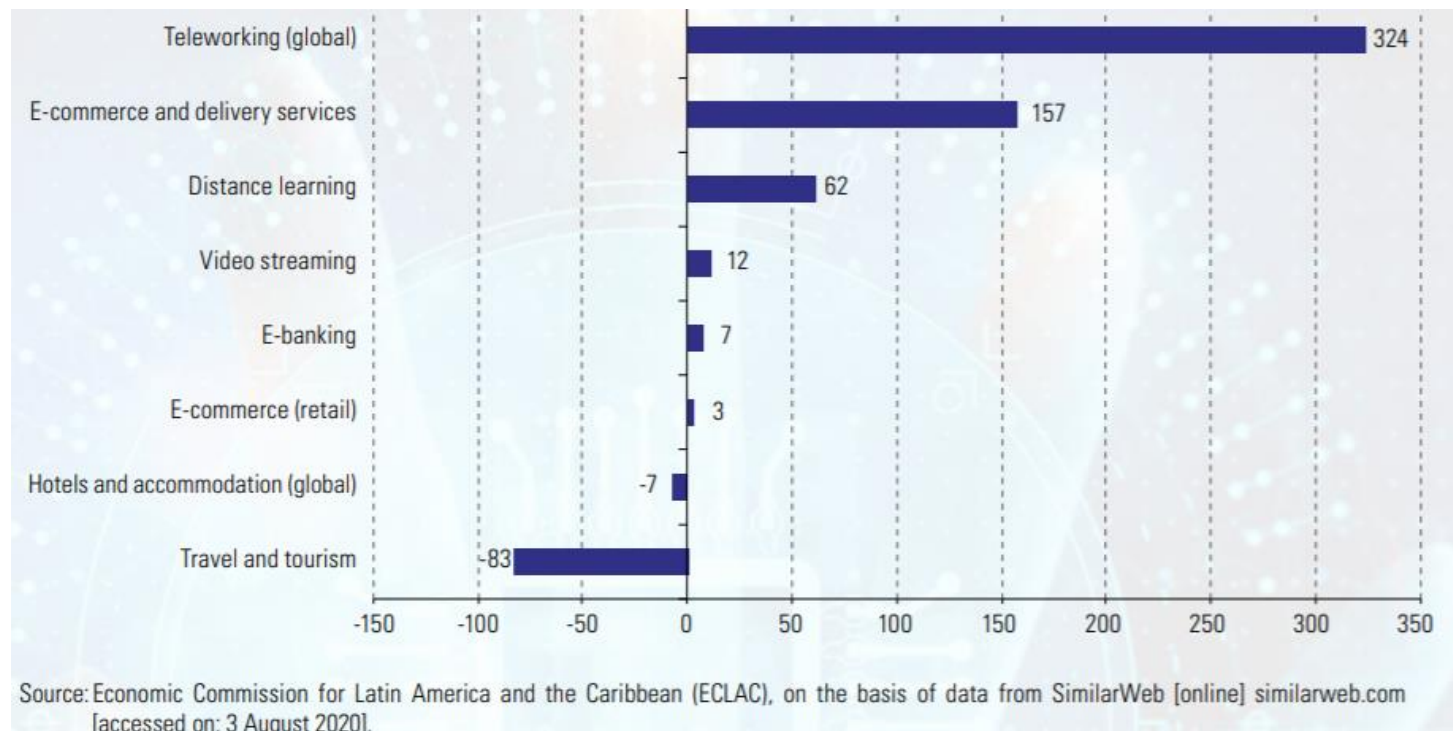


UNITED NATIONS

ECLAC

Website traffic shows significant increase in the use of digital solutions for teleworking, distance learning and online shopping

Latin America (5 countries): a changes in activity level by sector between the first and second quarter of 2020 based on website traffic and use of teleworking applications (Percentages)



No.7 Special Report COVID-19

26 August 2020

Universalizing access to digital technologies to address the consequences of COVID-19

A. Progress and limitations relating to digitization during the pandemic

- Digital technologies have been essential to the functioning of the economy and society during the crisis caused by the coronavirus disease (COVID-19) pandemic. Communications networks and infrastructure are being used more and more intensively for productive, educational, health and entertainment-related activities and to keep in touch with friends and relatives. Progress that was expected to take years to materialize has been made in a few months.
- Digital solutions in the areas of health, education, commerce and work play a leading role in the fight against COVID-19 because they facilitate physical distancing and allow the socioeconomic system to remain viable to a certain extent.
- Mobility data during the first months of quarantine show a world gripped by physical, but not virtual, paralysis.
- Data on the movement of people at the start of the lockdown show that, in the countries of the region, the number of people going to food outlets and pharmacies fell by 91%, to non-essential goods and entertainment outlets by nearly 78%, and to workplaces by about 49%. A large share of the population is continuing to follow stay-at-home advice as a compulsory or voluntary preventative measure.
- At the same time, website traffic and use of applications for teleworking, distance learning and online shopping shows a significant increase in the use of digital solutions. Between the first and second quarters of 2020, the use of teleworking solutions shot up by 324% and distance education grew by more than 60% (see Figure 1).
- The development and adoption of technological solutions are conditioned by structural factors: a heterogeneous production structure, a highly informal and precarious labour market, a vulnerable middle class, a weakened welfare state, poor digital infrastructure and socioeconomic restrictions on access and connectivity.

Contents

A. Progress and limitations relating to digitization during the pandemic..... 1

- The access gap exacerbates inequalities..... 2
- Low household income limits access to the Internet and the possibility of using mobile applications..... 4
- COVID-19 as a catalyst for discussion of data protection and privacy..... 15
- Regulation and antitrust measures..... 18

B. Policy measures and digital solutions..... 19

C. Towards reactivation..... 20

- New reality and structural change in the post-pandemic world..... 22
- Five lines of action..... 22

Unless otherwise indicated, the data used in people this report are from available up to 7 August 2020.

https://repositorio.cepal.org/bitstream/handle/11362/45939/5/S2000549_en.pdf

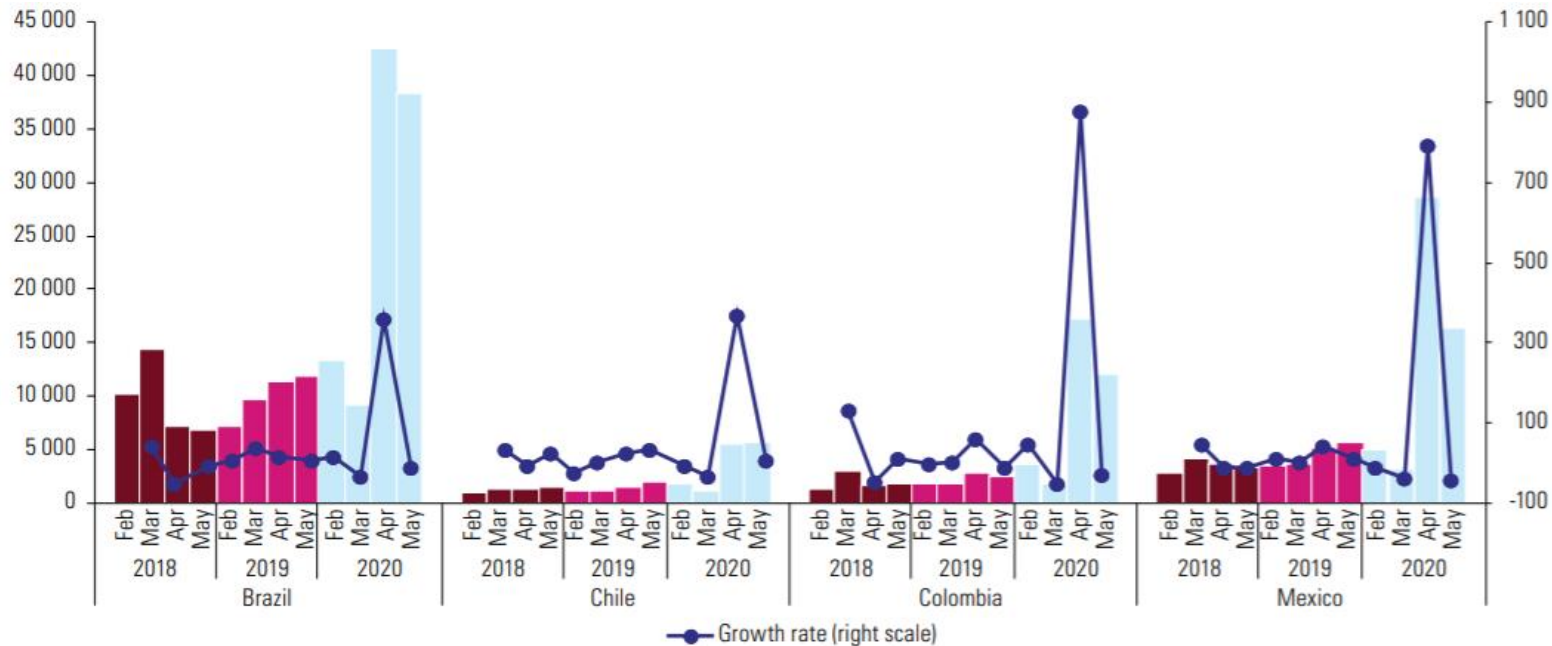


UNITED NATIONS



The pandemic accelerated online presence of firms

Latin America (4 countries): new business websites registered per month and monthly growth, 2018–2020 (Number of websites and percentages)



Between April and March 2020, the number of business websites increased:

- 8 times in Colombia and Mexico almost 4 times in Brazil and Chile

Source: Economic Commission for Latin America and the Caribbean (ECLAC), project "Big data for measuring and fostering the digital economy in Latin America and the Caribbean", 2020.



UNITED NATIONS

ECLAC

CHALLENGES IN DATA INNOVATION

- It is impossible to obtain the same level of control that we are used in official statistics (statistical representativeness).
- Clarity in the research questions and variables. Quality results require significant effort.
- Statistics require continuity, often difficult to ensure.
- More practical cases and development of methodological tools are required.



UNITED NATIONS

ECLAC

THANKS!

FOR MORE INFORMATION

Big data for measuring the digital economy (valeria.jordan@cepal.org)

<https://www.cepal.org/en/proyectos/big-data-grandes-datos-la-economia-digital-america-latina-caribe>

COVID-19 Observatory in Latin America and the Caribbean

<https://www.cepal.org/en/topics/covid-19>



UNITED NATIONS

ECLAC