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Something old, something new: a reflexion on the new normal for statistical producers[1]

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Something old, something new: a reflection on the new normal for statistical producers

Lígia Maria Nunes

Traditionally central banks answer new statistical requirements based on legal documents such as regulations or guidelines. These are the times when statistical authorities ask reporting institutions for new data, adapt IT systems, strictly apply the established methodologies and when most of the work is done aiming to address mature needs. Then, COVID-19 pandemic came and quaked many routines. With the fear of having no data but the strong belief that decision makers needed to measure what was happening in the world, statistical producers challenged their way of working. COVID-19 turned several impossible into possible: with a deep sense of public service, teams started looking for alternative data and for new methodologies to anticipate the release of existing statistics and to produce new statistical indicators. Institutions cooperated faster than ever and from the trainee to the Board a new mindset came up: the statistical function has to be agile in such way that statistical authorities are capable to answer users' needs in any circumstance.

The COVID-19 pandemic was an extreme event and the world is looking for its "new normal". Inspired by some new approaches that were adopted by Banco de Portugal following the outbreak of the pandemic, this paper aims to reflect on what should be the "new normal" for statistical producers: should they go back to the traditional way of doing statistics or should their keep alive the recent learnings?

Keywords: statistical function, corporate culture

JEL classification: M14

1. Introduction

The COVID-19 pandemic disrupted the world. Economic relationships were broken making statisticians facing one of the biggest challenges of their professional lives: how to measure the unmeasurable. Senior statisticians warmed up to such a challenge in 2008 with the outbreak of the great financial crisis but, as we know, routines easily pull us down to our "statistical comfort zone". Here is my billion-dollar question: how many crisis do we need to internalize the "something new"?

This paper is a reflection on how much the Banco de Portugal's statistics department is internalizing the lessons learned through the COVID-19 pandemic time.

2. Reflection #1: old data vs new data

Central bank statistics are traditionally compiled with data directly reported by institutions (e.g. assets and liabilities broken down by multiple criteria) and administrative data (e.g. public registers, tax files).

The great financial crisis flagged the importance of granular data, which became crucial to take the statistical function to the next level of producing whatever users need. The pandemic crisis confirmed that importance but flagged that it could be not enough. Firstly, because some traditional data – even those with monthly frequency – became insufficiently up to date to be useful at that time; secondly, because the outbreak of the pandemic made statistical authorities feared of not having data from the respondents due to offices closures.

New data was needed and statistical authorities started looking for alternative sources to complement official statistics and replace missing reports. In Banco de Portugal, we looked for "internal" new data sources, since we realised that already existing datasets – especially administrative data that had been collected for many years – were not duly exploited for statistical purposes: sometimes because potential users were not aware of their existence or because its sharing was difficult. Additionally, we looked for external new data, taking benefit from the new digital information, namely web-based indicators.

For instance, combining both strategies, the Banco de Portugal ensured that the publication of external statistics would not be disrupted. In particular, in May 2020, the Bank was able to publish the monthly preliminary indicator on the evolution of the travel component of the balance of payments. Compiled mainly with payment cards information, this preliminary indicator allowed to anticipate in 20 days the evolution of exports and imports of tourism and follow the impacts of COVID-19 pandemic in this sector, which in 2019 generated a direct and indirect contribution of almost 12% to the Portuguese GDP.

What did we learn?

Given its dynamic nature, measuring economic activity can be a never-ending process: there will always be new structural and unexpected developments that are not yet measured but should be. Indeed, the COVID-19 pandemic was a stark reminder that new challenges can constantly emerge that require changes in the statistical information produced and offered. As stated by Tissot *et al* (2020) "it urges that statisticians figure out how complementary data sources can be brought into their mainstream statistical frameworks (i) by integrating alternative input sources within conventional methodological processes or (ii) using these additional sources to get supporting and benchmarking data that can act as an "information buffer" in times when conventional official statistics dry up or are lagged significantly".

What is our something new?

It became unquestionable that we need to make a better use of existing data. As mentioned, the COVID-19 context shed light on the existence of various datasets that may not be widely known and this suggests that simple quick wins could be achieved by better exploring and publicising internally the information available. To overcome this issue, in 2022, we implemented an internal data warehouse that centralizes all data received in the statistics department, with non-harmonized formats, turning its sharing easier. Also in 2022, with a department restructuring, an innovation team, highly specialized in mathematics and data science, was created under the integrated information management division to give answer to both challenges: to create mechanisms to turn easier the use of existing data and to explore the so-called alternative or big data sources, that currently mostly fall outside the official statistics boundary, but that could provide timelier, more frequent and complementary insights to traditional statistics.

3. Reflection #2: old data vs new statistics outputs

Traditionally central banks answer new statistical requirements based on legal documents such as regulations or guidelines. During several months, or even years, statistical authorities mature their needs, adapt reports and IT systems and strictly apply the established methodologies. This is the something old.

However, unexpected events, such as the COVID-19 pandemic, quaked all the routines and highlighted the urgency to have new, more timely and frequent statistics.

The need for timely statistics reflected the fact that the speed of the pandemic and the size of the economic disruptions had called for having more rapid data at hand to quickly assess the economic situation. Many central banks simply felt the need to do, whatever they could, to bring forward the publication of several statistics. In 2020, the Banco de Portugal anticipated the publication of monetary and financial institutions balance sheet items and interest rates, statistics on securities issuance and the annual economic and financial indicators of the non-financial corporations.

At the same time new economic phenomena emerged and it became urgent to measure them. I would like to mention two of them. The first had to do with identifying the effects of the pandemic on business activity. The frequency of official statistics (quarterly and annually) turned them clearly insufficient to recognise new trends and to design policies to mitigate economic impacts on enterprises themselves and on the economy. Having this in mind, the National Statistics Institute (NSI) and Banco de Portugal launched the Fast and Exceptional Enterprise Survey, with the aim of identifying the effects of the pandemic on business activity. This survey was initially conducted every week, and then it was spread out. To launch a new survey could be seen as "the something old". In fact, this is the traditional way through which statistical authorities ask for new data. However if one considers that the release of the first results took place on 14th April, less than one month after the Portuguese Government had declared the state of emergency and mandatory lockdown, maybe, we can find on it something really new. Faster than ever, the two statistical authorities – the NSI and the Banco de Portugal – worked together from the design of the survey until the publication of the main results.

The second phenomenon had to do with a set of measures approved by the Portuguese Government and by financial institutions to protect families and corporations, aiming to ensure their maintenance of liquidity. One of these key measures was the approval of loans moratoriums, a support to banks' customers on their loans' obligations, which allowed the extension of the payments' dates with the creditor institutions without registering a contractual default. At the time, an interdepartmental team was created at Banco de Portugal to monitor and discuss the impact of loans moratoriums under different perspectives – supervision, financial stability, legal and statistics.

When the discussion on how to get numbers started, the huge potential of the Banco de Portugal's Central Credit Register was reinforced. In fact, through this micro database it was quite easy to request to financial institutions to identify the loans' contracts covered by these schemes. And in April 2020, the Banco de Portugal started compiling monthly data on loans under moratorium, namely, the amount of loans and the number of associated debtors for private individuals and non-financial corporations. During the first couple of months, this information was restricted for internal usage and, in March 2021, it was externally released in BP*stat*, the Bank's statistical portal.

What did we learn?

In the "new normal" central banks should shape statisticians to a mindset of deeply understanding that our mission must go beyond the standard offering of official statistics. Statistical authorities must be ready to give timely information on the new issues raised by new events, especially when the traditional statistical apparatus does not properly cover them. It is time to move from this "answer-in-time-of-crisis" to a new modus operandi on central banks statistics.

Besides shaping teams, three additional points should be taken into account.

One has to do with our answer to the trade-off between quality and timeliness. Advances in the compilation processes are sometimes achieved at the price of reducing the quality in the aggregates measured. Are we willing to pay this price? If we are not there already, an alternative could be to look for other timelier indicators built using not the "traditional" but secondary data sources. They could be very useful to shed light on specific economic areas such as earlier estimates on credit granted to the economy, public debt, net lending/net borrowing of the economy, current and capital balance or non-financial corporations' profitability.

The second point covers the fact that statistical frameworks have to become more flexible to address evolving users' needs and the sheer uncertainty created by the crisis. As stated by Tissot *et al* (2020) "this called statisticians to re-assess the relevance and agility of their tools and methods to deliver required statistics. Key was to be able to meet the (new types of) users' data demands as structural changes were quickly happening. They had in particular to "think the unthinkable", in order to support policy makers despite the high-level data uncertainty […]. They also had to be innovative, for instance to deal with the methodological issues induced by the new policy measures taken in response".

Lastly, digital innovation and institutional cooperation are key to help accelerating the production of official statistics. A more automated linking between granular datasets and the macro statistical frameworks could help to compress compilation times, provide more frequent indicators, and reduce revisions. In addition, higher levels of cooperation and coordination among statistical and public authorities could accelerate processes already in place to allow effective exchanges of information, especially when crisis occurred.

What is our something new?

New data explorations are a priority of the Banco de Portugal's current strategic plan. The recognition of the huge potential of micro databases combined with teams increasingly skilled to work with large datasets and the availability of new tools to do it, are powering the development of new analysis and outputs. Web analytics results have been confirming the importance of giving users relevant and relatable data. As an example, the statistical press releases on loans under moratorium was accessed, between April 2021 and January 2022, on average, 450 times per month, while the remaining statistical press releases had, on average, 360 accesses per month.

In the aftermath of the COVID-19 pandemic, the outbreak of a war. With the same sense of public service, teams starting exploring all available data to evaluate the exposure of the Portuguese economy to Russia and Ukraine. In a couple of days, using different databases it was possible to conclude that the exposure of Portuguese corporations and banks to these markets was quite low.

With the war, prices pressures and a new wave of challenges for non-financial corporations. Under this context, the NSI and Banco de Portugal decided to conduct a new edition of the Fast and Exceptional Enterprise Survey in May 2022, taking into account that the pandemic had not yet been overcome and that the effects of the armed conflict in Ukraine had intensified the problems in global supply chains and the increase in prices of energy and other essential products.

The Statistics Department's strategic plan for 2021-25 encourages divisions in charge of statistical production to look constantly for new statistical indicators and new statistical outputs, especially related to emerging issues.

4. Reflection #3: old data vs new ways of communicating statistics

During the last years, central banks became more aware of the importance of the statistical communication function. In fact, several works have been published supporting the need of moving from a statistical dissemination approach to a communication approach. More than selecting a proper channel or the most creative way of showing data, communication is, and will always be, about putting users at the centre of our activity.

Traditionally central banks publish in their websites, or statistical portals, a large amount of data series that, time to time, are accompanied by some statistical press releases or additional analysis. However, overall, central banks statistical communication practices are still based on the regular data series publication.

The COVID-19 pandemic rocked this poor way of dealing with users. Under so much uncertainty, a sense of supporting users increased without precedents. As mentioned, central banks revisited the services they provided to their stakeholders, for instance by increasing the frequency and/or timeliness of their estimates to better support policy decision and several initiatives were taken to give information to enterprises and to the general public reducing the uncertainty of the that times.

As many central banks, the Banco de Portugal launched in BP*stat* a dedicated webpage to follow the impact of COVID-19 in several statistical indicators such as GDP, inflation, payment habits, banking loans and deposits, non-financial corporations profitability, public debt, general government financing, interest rates, tourism or current and capital account. Besides the main results, in this wepage the Banco de Portugal explained how to read the numbers and how to understand their evolution under that specific context.

What did we learn?

I dare to say that the COVID-19 pandemic context leveraged the statistical communication function in the Banco de Portugal. In that particular moment, we had not to convince anyone of the urgency to take care of our users. We built a team, the StatsComm Team, with volunteer people from different divisions and departments to discuss which main statistical indicators should be given and explained to users in BPstat. With strong habits of always presenting the same information using the same technical vocabulary, this was the beginning of a challenging journey of putting users above our "statistical comfort zone". The results were encouraging: between April 2020 and May 2021 the BPstat webpage "The impact of COVID-19 on the Portuguese economy in 2020" was visited 22.5 thousand times, which represents about 40% of all the accesses to all the news published in BPstat during the same period.

What is our something new?

The StatsComm Team is, today, a multidisciplinary team of around 15 people belonging to five different divisions: central balance sheet, monetary and financial statistics, financial accounts, external statistics, financial system microdata and communication and planning division. With a deep understanding of specific statistics and an increasing knowledge in communication and data visualization themes, this team is in charge of creating statistical content to publicize and explain central bank statistics and it is committed in promoting statistical literacy among the society.

The communication initiatives promoted by the Banco de Portugal are now, increasingly targeted, to the most searched and relevant economic and statistical subjects at each time. So far, the Banco de Portugal is working directly with five different groups (entrepreneurs, students, teachers, journalists and the general public) and the statistical communication initiatives mainly rely in BPstat and social media – Twitter, YouTube and Instagram.

Under the department restructuring, a communication [and planning] division was created, mirroring how crucial a good communication strategy is to accomplish our mission.

5. Final remarks

Here is my billion-dollar question: how many crisis do we need to internalize the "something new"? Maybe, no more. Maybe, we only need to be challenged from time to time to remember the goals that we can achieve, the tasks we can do and how, with our work, we can make the world a more informed place and, thus, a better place to live.

Maybe we only need to be sure that we cannot turn back from the recent developments: we cannot give up on looking for new data sources, developing new statistical outputs or exploring new methodologies.

Maybe we only need to understand that we cannot give up on our independency to produce opportune and relevant information and that the way to do it is increasingly replacing aggregated reports by microdata.

Maybe we need to understand that whatever we do, we do it for our users, and that it is crucial to remind often our teams that every single one contributes to the overall user experience, even the most backstage worker who seemingly interacts with no one.

Maybe leaders need to increasingly support a mindset of "disruption", encouraging teams to take calculated risk, using mistakes as learning and growth opportunities to explore new technologies, techniques and approaches.

Maybe it is time to take advantage of our highly qualified teams and the digital transformation process in course.

Maybe this crisis was a "wakeup call to deal with issues that had been neglected for too long" (Tissot *et al*, 2020). With no more excuses or complexities, it is time to understand and internalize the lessons learnt.

So let us be as flexible as we can, keep learning, keep doing, keep cooperating and building our own path to be prepared to accomplish our mission: to give users whatever they need in any circumstance.

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SOMETHING OLD, SOMETHING NEW: A REFLECTION ON THE NEW NORMAL FOR STATISTICAL PRODUCERS

AUGUST 2022| BASEL

LÍGIA MARIA NUNES | HEAD OF COMMUNICATION AND PLANNING DIVISION

BANCO DE PORTUGAL
EUROSISTEMA

HOW MANY CRISES DO WE NEED TO INTERNALIZE THE **“SOMETHING NEW”**?

Reflection #1: **OLD VS. NEW DATA**

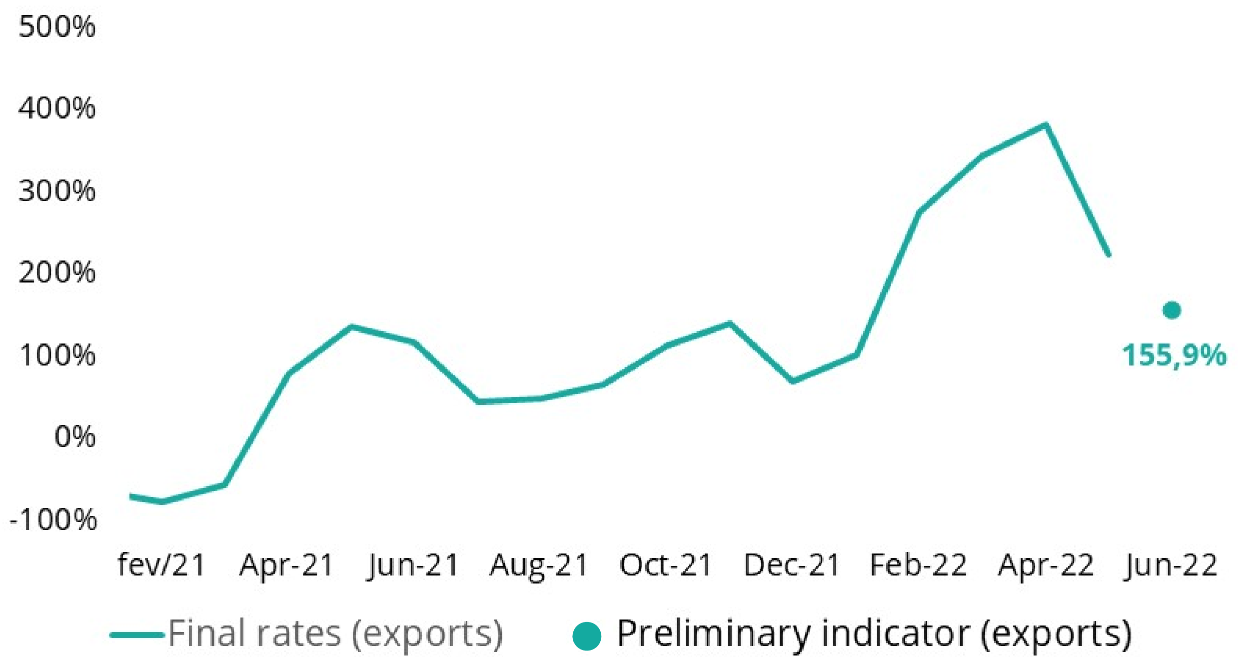
AGGREGATED DATA

AND MICRODATA CAN

NOT BE ENOUGH

ALTERNATIVE DATA SOURCES

TRAVEL EXPORTS (y-o-y rate of change)



WHAT DID WE LEARN?

“It urges that statisticians figure out how **complementary data sources** can be brought into their mainstream statistical frameworks (i) by **integrating alternative input sources** within conventional methodological processes or (ii) using these **additional sources** to get supporting and benchmarking data that can act as an **“information buffer”** in times when conventional official statistics dry up or are lagged significantly.

Tissot *et al* (2020)

OUR SOMETHING NEW

01

INTERNAL DATA IS NOW EASY TO BE SHARED

02

HIGHLY QUALIFIED TEAMS TO BOOST DATA EXPLORATION

Reflection #2: **OLD VS. NEW STATISTICS OUTPUTS**

2020

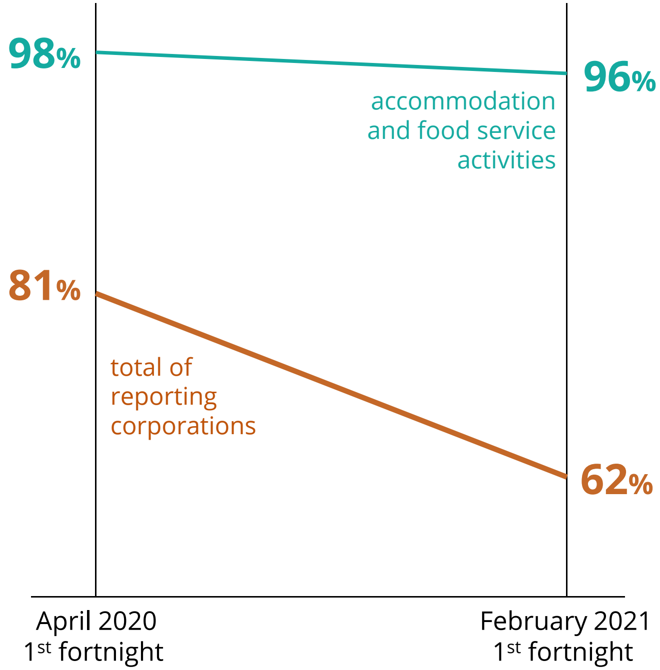
the Banco de Portugal

anticipated the publication

of several statistics

Fast and Exceptional Enterprise Survey

% of corporations with decreased turnover during lockdowns



Loans under moratorium

Private individuals

January 2021

20
billion €

16.1% of total loans

408
thousand debtors

8.8% of total debtors

SHAPE YOUR TEAMS

OUR MISSION MUST GO BEYOND THE STANDARD STATISTICAL OFFER

WHAT DID WE LEARN?

01

TIMELIER INDICATORS BUILT USING SECONDARY DATA SOURCES

02

MORE FLEXIBLE STATISTICAL FRAMEWORKS

“THINK THE UNTHINKABLE”

03

DIGITAL INNOVATION AND INSTITUTIONAL COOPERATIONS

OUR SOMETHING NEW

NEW DATA EXPLORATIONS

a Banco de Portugal's priority

new data exploration tools

teams increasingly skilled to work with large datasets

web analytics results confirm the importance of giving users relevant and relatable data

Reflection #3: **OLD VS. NEW WAYS OF COMMUNICATING STATISTICS**

COVID-19 ROCKED THE POOR WAY WE WERE DEALING WITH USERS

OUR SOMETHING NEW

Statscomm team

- multidisciplinary team of 15 people
- a new statistical communication strategy target oriented
- a new communication [and planning] division at the Statistics department

How many crises do we need to internalize the **“something new”**?

Maybe, **no more!**

- Keep looking for new data sources, statiStical outputs and methodologies
- Don’t go back on the flexibility given by microdata
- understand that **users matter**
- Encourage teams to **take risk**

REMEMBER YOUR MISSION: **GIVE USERS WHATEVER THEY NEED IN ANY CIRCUMSTANCE**