

**Workshop on Trade in Services Statistics
Organized jointly by UNECLAC and UNSD in
Cooperation with WTO**

*Challenges of COVID-19 to SITS
compilation*

DAY 3,
11 December 2020



OUTLINE OF THE PRESENTATION

The challenges for SITS compilers

The Italian experience (two examples):

- ✓ Travel item
- ✓ Other services

The challenges for SITS compilers

Ensuring Continuity in the Production of External Sector Statistics During the COVID-19 Lockdown (IMF – Statistics Department)

Cross-border trade in services will be largely impacted. With businesses stalled, several components will be direly affected, in particular transport and travel

The collection of data should focus on those types of services that are the most relevant for the economy

For assessing the impact of the pandemic on travel related services, and for adequately estimating the drop in their values, compilers may use alternative sources

<https://www.imf.org/-/media/Files/Publications/covid19-special-notes/en-special-series-on-covid-19-ensuring-continuity-in-the-production-of-external-sector-statistics.ashx>

The challenges for SITS compilers

Guidance on the compilation of the balance of payments statistics in the context of the Covid-19 crisis (Eurostat – Integrated global Accounts and Balance of Payments)

Travel and transport were the most affected service categories, not only economically, but also in expected challenges to data compilation

...a number of possible alternative data sources and methods were identified:

- Mobile positioning data received from mobile phone operators;
- Credit card data;
- Surveys conducted via telephone, instead of in-person...

For the compilation of travel services, a virtual workshop has been established where compilers ... have set up an exchange of bilateral data

https://ec.europa.eu/eurostat/documents/10186/10693286/BOP_guidance.pdf

The challenges for SITS compilers

Some considerations on the possible impact of the COVID-19 pandemic on balance of payments statistics (ECB)

Statisticians have been **actively identifying the vulnerabilities of their statistical systems** to the pandemic and looking for solutions to address these vulnerabilities since the first COVID-19 cases were identified in Europe in February.

https://www.ecb.europa.eu/stats/balance_of_payments_and_external/balance_of_payments/shared/pdf/Impact_of_Covid-19_in_BoP.en.pdf

The challenges for SITS compilers

The Italian experience (two examples):

- ✓ **Travel item**
- ✓ **Other services**

The Issue

In March 2020 the Italian frontier survey was interrupted

Alternative data sources (big data):

- ***Mobile Data***
- ***Credit/Debit Cards***
- ***Mirror Data***
- ***Administrative Data (Airport Authorities)***

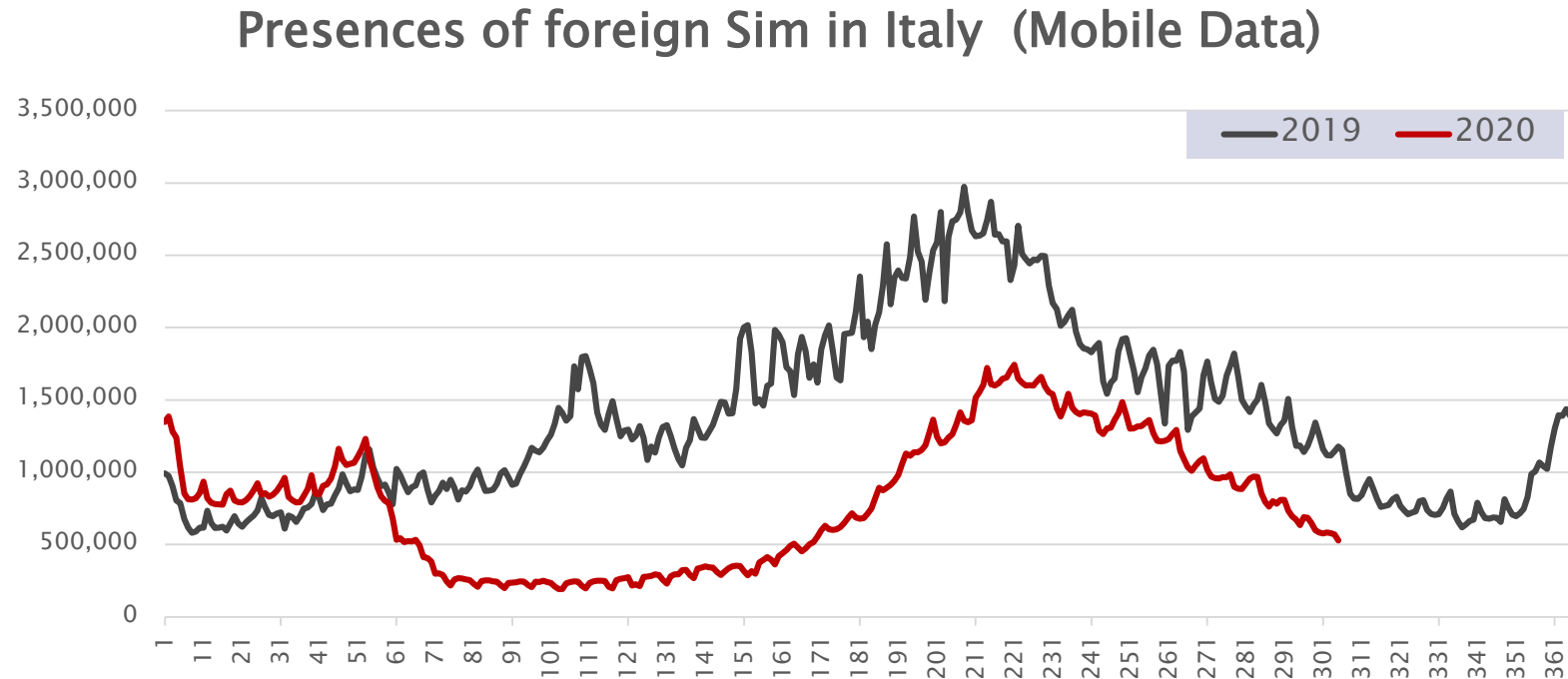
The Italian Experience: Travel Item

Methodological Approach (two steps):

- 1- Estimation of variation rates with the new data sources***
- 2- Application of the variation rates to the historical expenditure levels
(credits and debits)***

The Italian Experience: Travel Item

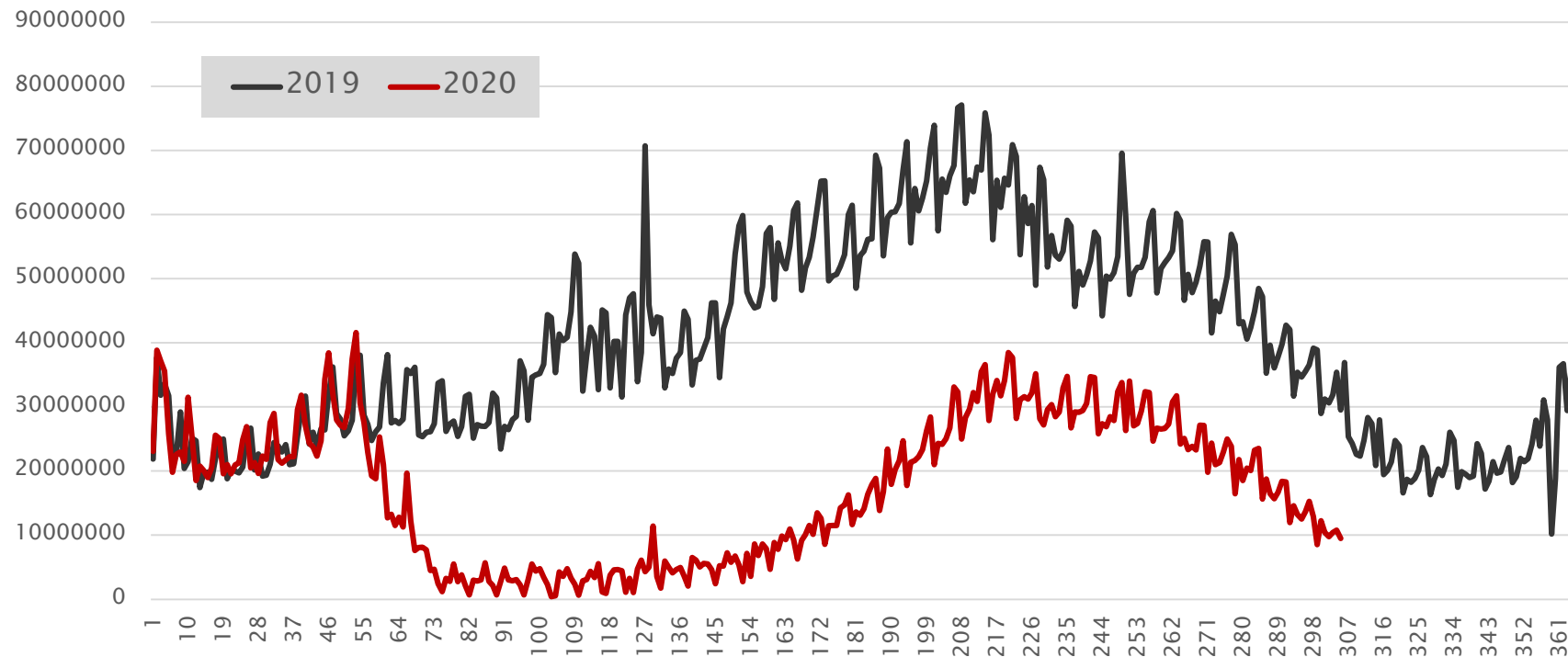
1- Estimation of variation rates with the new data sources



The Italian Experience: Travel Item

1- Estimation of variation rates with the new data sources

Electronic payments in Italy by foreigners

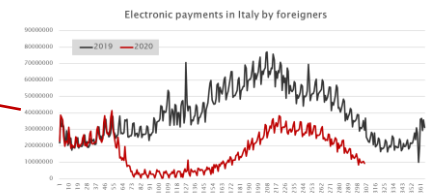
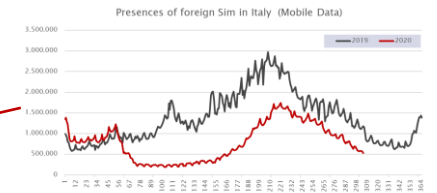


The Italian Experience: Travel Item

2- Application of the variation rates to the historical levels of expenditures

$$\text{Variation Rate}_{Q2\ 2020;2019} = \frac{\text{Indicator}_{Q2\ 2020}}{\text{Indicator}_{Q2\ 2019}}$$

$$\text{Expenditure}_{Q2\ 2020} = \text{Expenditure}_{Q2\ 2019} \cdot \text{Variation Rate}_{Q2\ 2020;2019}$$



The Italian Experience: «Other» Services

The issue

Services (other than Travel and Transports) are collected via enterprises direct survey on a quarterly basis.

But Bank of Italy publish a monthly BOP, and in the monthly dissemination, the “other” services are estimated with a time series model.

It is not appropriate using a traditional time series models during the Covid-19.

How to correct it?

The Italian Experience: «Other» Services

The way forward (benchmarking techniques)

Identifying one or more benchmarking time series (export of goods) correlated with the target (export of services) and available on a monthly basis



The Italian Experience: «Other» Services

The way forward (benchmarking techniques)

Correlations analysis

	S_W1_credits	S_W1_debits
S_W1_credits	1	0.93520
S_W1_debits	0.93520	1
G_D6_credits	0.87982	0.78593
G_D6_debits	0.29445	0.23284
G_W1_credits	0.84752	0.80588
G_W1_debits	0.66379	0.66054
S_W1_credits_lag1	0.42685	0.45795
S_W1_credits_lag4	0.90055	0.86831
S_W1_debits_lag1	0.43263	0.52991
S_W1_debiti_lag4	0.84484	0.90102

Example of a regression model

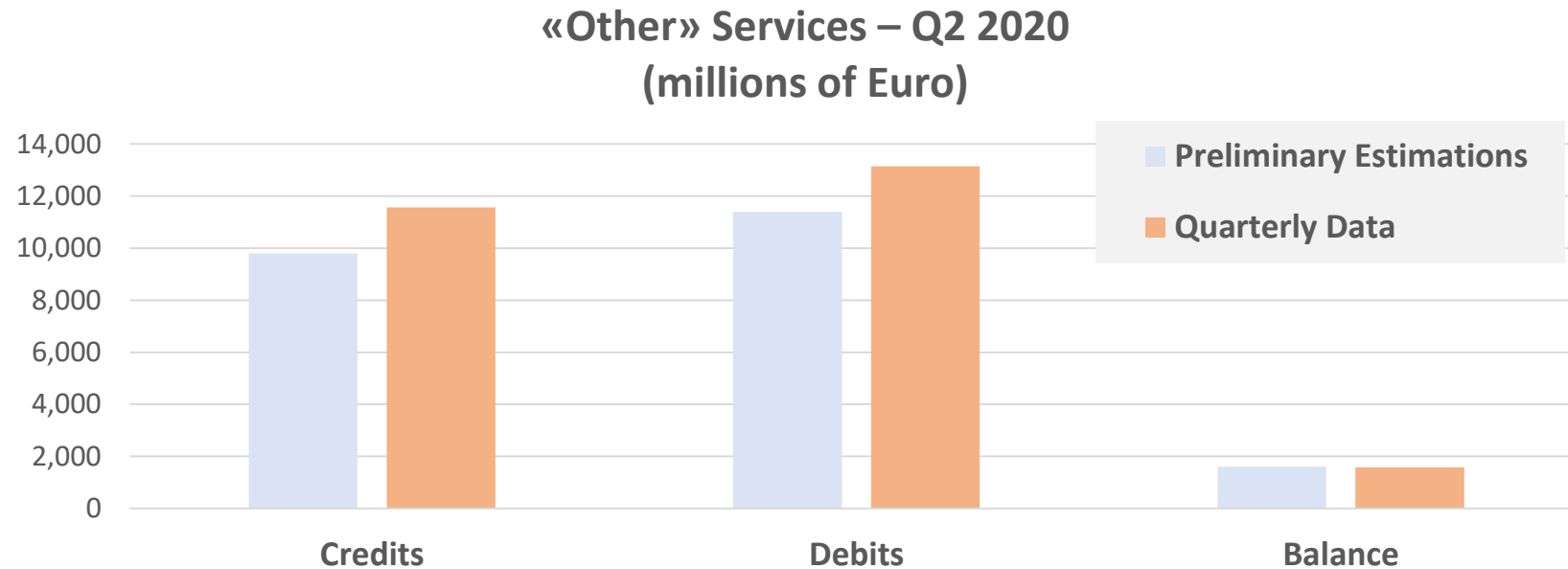
Parameter Estimates					
Variable	DF	Parameter Estimate	Standard Error	t Value	Pr > t
Intercept	1	-4905.372321548	1548.87548	-3.17	0.0034
G_D6_credits	1	0.11111	0.02526	4.40	0.0001
G_D6_debiti	1	0.04797	0.02851	1.68	0.1026
S_W1_credits_4	1	0.26400	0.18064	1.46	0.1539
S_W1_debiti_4	1	0.43756	0.16074	2.72	0.0105

Root MSE	569.56754	R-Square	0.9094
Dependent Mean	10115	Adj R-Sq	0.9004
Coeff Var	5.63068		

The Italian Experience: «Other» Services

Main Results

Our model (based on elasticity) in the second quarter of the year has a bit underestimated credits and debits, but it has evaluated correctly the balance (the primary target: it is a GDP component)



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