The pandemic effect in the Production of Statistics in Brazil – The FGV case

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Summary

- Data Collection after the pandemic: problems and opportunities
- Brazilian economic context
- Surveys: testing questions after the pandemic
Impact of the Covid Crisis on the Production of Statistics
Data Collection of Prices

Statistical institutes permanently seek to use the latest technologies and technologies. The covid-19 pandemic challenged all methods used before.

The key point to be considered in the modern production of price statistics is the access to larger and digitalised databases granting:

- More reliability
- More agility
- Access to quantity information

The pandemic accelerated the movement towards this new paradigm
Challenges 1 - Online collection of price data after the pandemic

Before the Pandemic:
- 41% of the index weighting structure was already covered by online collection.
- 5% of the index weighting structure already had online prices incorporated into the index’ calculation.

During the Pandemic:
- 57% of the index weighting structure was already covered by online collection.
- 12% of the index weighting structure already had online prices incorporated into the index’ calculation.

Future:
Maximum expansion of collection via:
- Scanner Data
- Web Scraping
Sectors Covered by Web Scraping Collection

**BEFORE the Pandemic:**

- **FLIGHT TICKETS**
  - 14,076,248
  - Sept/18

- **RENT**
  - 29,641,311
  - Dec/18

- **NEW AND USED CARS**
  - 22,963,825
  - Dec/18

- **ELECTRO-ELECTRONICS**
  - 4,997,164
  - Dec/18

- **FOOD**
  - 20,874,334
  - Apr/19

- **FUEL**
  - 334,637
  - Apr/19

- **PHARMACY**
  - 15,576,333
  - Sept/19

- **RIDESHARING APPLICATION**
  - 95,064
  - Feb/20

**Started being covered DURING the Pandemic:**

- **PERFUMERY AND COSMETICS**
  - 12,848,18
  - Mar/20

- **HOTELS**
  - 371,124
  - Mar/20

- **TICKETS**
  - 118,811
  - Mar/20

- **MOTORCYCLES**
  - 104,567
  - Mar/20

- **APPAREL**
  - 2,953,203
  - May/20

- **CAR RENTAL**
  - 38,745
  - May/20

- **EATING OUT**
  - 4,464,439
  - Mar/21
Challenges 2 – Survey data Collection during the pandemic

Business Surveys - Number of questionnaires

-16%

Consumer Survey - Number of questionnaires

+6%

Web (mainly) and telephone

Telephone
Challenges 3 – Demand for more (and faster) survey information

Changes...

• FGV started to produce flash versions of all surveys

• Investment in producing alternative methods for generating statistical information: Twitter CCI

• Additional timely questions were added to the surveys: quite popular but not all of them are related to the core topic of the tendency surveys (economic cycles) - Guidelines
Opportunities 1 – Twitter CCI: results to be improved
Opportunities 2 – New Questions

- Questionnaires had been reduced to the core questions two year prior to the pandemic.
- Questions related to the questionnaire of the EU Harmonised System were kept.
- Monthly choice of subjects and questions are determined as part of an agenda:
  - t-21 days: topics are defined after discussions within the Institute.
  - t-14 days: first version of questionnaire.
  - t-7: revised version of questionnaire.
- Some questions may remain as quarterly topics.
Brazilian Macro Context
The Brazilian dream and fall
Real annual GDP growth (%) and average growth

<table>
<thead>
<tr>
<th>Year</th>
<th>Latin America ex Brazil</th>
<th>Brazil</th>
<th>BRZ idiosyncratic crisis</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>-8%</td>
<td>-6%</td>
<td>-4%</td>
</tr>
<tr>
<td>2010</td>
<td>-6%</td>
<td>-4%</td>
<td>-2%</td>
</tr>
<tr>
<td>2011</td>
<td>-4%</td>
<td>-2%</td>
<td>0%</td>
</tr>
<tr>
<td>2012</td>
<td>-2%</td>
<td>2%</td>
<td>4%</td>
</tr>
<tr>
<td>2013</td>
<td>0%</td>
<td>6%</td>
<td>8%</td>
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<tr>
<td>2014</td>
<td>-2%</td>
<td>-0.3%</td>
<td>0%</td>
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<tr>
<td>2015</td>
<td>-0.3%</td>
<td>-0.3%</td>
<td>0%</td>
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<td>2016</td>
<td>0%</td>
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<td>2017</td>
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<td>2%</td>
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<td>2018</td>
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<td>4%</td>
<td>4%</td>
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<tr>
<td>2019</td>
<td>4%</td>
<td>6%</td>
<td>6%</td>
</tr>
<tr>
<td>2020</td>
<td>6%</td>
<td>-2%</td>
<td>-4%</td>
</tr>
<tr>
<td>2021*</td>
<td>8%</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>2022*</td>
<td>10%</td>
<td>12%</td>
<td>12%</td>
</tr>
</tbody>
</table>

Source: IMF / FGV (LA GDP and forecasts) / IBGE

**Idiosyncratic Crisis**
- Worsening fiscal situation
- Other Macro adjustments
- Corruption scandals
Output Gap may reach 10 Years in negative territory
Real annual GDP growth (%) and average growth

Source: FGV IBRe
Present situation has worsened (again) in the short term

<table>
<thead>
<tr>
<th>Favourable factors</th>
<th>Unfavourable</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Terms of Trade</td>
<td>* Political Uncertainty</td>
</tr>
<tr>
<td>* Vaccination has accelerated</td>
<td>* High inflation: 9.7% in August (12m)</td>
</tr>
<tr>
<td></td>
<td>* High Unemployment (14%)</td>
</tr>
<tr>
<td></td>
<td>* Risk of Energy Rationing</td>
</tr>
<tr>
<td></td>
<td>* Long run: Fiscal situation still unsolved</td>
</tr>
</tbody>
</table>

Fonte: IBGE
Manufacturing and Consumer Confidence – Two different tales

All series converted to average = 100; standard deviation = 10. Base period = 07/2010 to 06/2015

Brazilian Manufacturing Confidence

not so far from the World

Factors influencing lower Consumer Confidence:

- Unemployment
- Inflation
- Uncertainty (capturing non economic factors)

Brazilian Consumer Confidence

far Away from the rest of World

Source: OECD / FGV
Business Surveys - Questions introduced after the pandemic:

- Emergencial measures to protect employment and income
- Credit
- Problems related to Inputs and/or Raw Materials
- E-commerce

Source: FGV IBRE
Questions related to the firm’s workforce
December/2020, as % of total

Has the firm resorted to any government employment or income maintenance programme?

- Yes: 63%
- No: 37%

...What do you expect to happen with the firm’s workforce six months after the quarantine period*?

- Will rise: 22%
- Will remain stable: 69%
- Will reduce: 9%

* Quarantine refers to the period in which firms that resorted to the employment/income maintenance Programmes wouldn’t be able to fire employees.
Has the company obtained credit in the last 6 months?

In March 2021, 62.3% of companies did not need to obtain credit and almost 30% answered yes.

For what purpose?

For the 30%, the main purpose was working capital.
In March 2021, 65.7% of companies had no difficulties obtaining credit.
Difficulties in obtaining inputs and/or raw materials
November/20 & June/2021, as % of total

Is the company facing difficulties in obtaining inputs and/or raw materials needed for production at the moment?

<table>
<thead>
<tr>
<th></th>
<th>nov/20</th>
<th>jun/21</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>56</td>
<td>52</td>
</tr>
<tr>
<td>No</td>
<td>45</td>
<td>48</td>
</tr>
</tbody>
</table>

In the end of 2020, over half the (weighted) firms was having difficulties in obtaining inputs and/or raw materials. The result practically didn’t change in 2021.

When does the firm believe that the provision of raw materials and intermediate goods will normalise?

<table>
<thead>
<tr>
<th></th>
<th>By the end of the 2021Q2</th>
<th>By the end of the 2021Q3</th>
<th>By the end of 2021</th>
<th>Only in 2022</th>
<th>Cannot predict</th>
</tr>
</thead>
<tbody>
<tr>
<td>nov/20</td>
<td>06</td>
<td>25</td>
<td>26</td>
<td>26</td>
<td>18</td>
</tr>
<tr>
<td>jun/21</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

In jun/21, firms were quite divided on the time that the provision of raw materials and intermediate goods will occur.

* There was also a question on the reasons for the difficulties in obtaining inputs and raw materials
Understanding E-commerce (may turn into continuous question)
November/20 & June/2021, as % of total

E-commerce sales as percentage of total sales

- Vehicles: 10, 22, 21
- Building inputs: 14, 25, 27
- Retail Trade: 08, 19, 21

Present Situation Index for firms according to the use of e-commerce (e-commerce sales as % of total sales in the trade sector)

- Firms above average in e-commerce
- Firms below average in e-commerce
Consumer Surveys - Questions introduced after the pandemic

- Household spending, debt, default
- Emergencial transfers
- Precautionary savings

Source: FGV IBRE
Consumers used additional income transferred by the government to buy essential goods and pay off debts.
45% of the lowest income families had their family finances worsened due to unemployment. Among high income families, over 30% showed a drop in revenue from family businesses.
Have you been saving due to fear of the pandemic?

Between late 2020 and mid-2021, more consumers started to save.

What do you intend to do with the saved resources?

- Spend partially
- Spend all
- Continue to save

Between late 2020 and mid-2021, more consumers started to save.
Payment of current expenses continue to be the main destination of precautionary savings. Purchase of durable goods, holiday travel expenses and debt settlement increased in 2021.
Ad Hoc Repeated Question
October/20 & April/21

Have you been postponing purchases because of the pandemic?

<table>
<thead>
<tr>
<th></th>
<th>October/20</th>
<th>April/21</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>61.8%</td>
<td>70.4%</td>
</tr>
<tr>
<td>No</td>
<td>38.2%</td>
<td>29.6%</td>
</tr>
</tbody>
</table>
Which factors are leading to the postponement of purchases of goods and services?

- Uncertainty about the pandemic: October/20: 53.3%, April/21: 50.4%
- Precautionary savings: October/20: 31.5%, April/21: 36.9%
- Fear of unemployment: October/20: 20.2%, April/21: 26.3%
- End of reserves: October/20: 11.0%, April/21: 22.5%
- Difficulties for obtaining a job: October/20: 12.0%, April/21: 21.6%
- Not being able to pay current expenses: October/20: 9.2%, April/21: 14.7%
- Others: October/20: 8.3%, April/21: 14.9%
By the time the majority of Brazilians are already vaccinated against covid-19, what do you expect will happen to your consumption of:

June/2021

Balances:
- Accommodation, restaurants, transports, etc: 32
- Clothing, health and personal care: 23
- Durables: 16
- Food and drinks: 12

Will rise:
- Accommodation, restaurants, transports, etc: 47
- Clothing, health and personal care: 33
- Durables: 25
- Food and drinks: 19

Will remain the same:
- Accommodation, restaurants, transports, etc: 38
- Clothing, health and personal care: 57
- Durables: 66
- Food and drinks: 74

Will reduce:
- Accommodation, restaurants, transports, etc: 15
- Clothing, health and personal care: 10
- Durables: 9
- Food and drinks: 7
Thank you!
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