Possible uses of Big Data in the compilation of National Accounts:

The case of the Tourism Satellite Account of Mexico

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The new data ecosystem offers other alternatives when there are things that change fastly....

**New data, faster every time**

How to take advantage of Data Diluge?
... there is a massive set of data which has not yet been used in the National Accounts!

There are structured and unstructured data sources which can be helpful...

- Complement the traditional sources
- Timely
- Information costs
- Detail of the information
- To expand the vision of the national accountant
Traditional information scheme

Supply

+ 5 Millions of establishments
+ 21 Thousand
1,049 National industries
617 Industries
304 Industry groups
94 Subsectors
20 Sectors

The SNA-Mexico is very strong by the SUPPLY side...
... but its breakdown on the use side is not such wide

One way: Using information from bank terminuses

Transactions data
- Income
- Number of transactions
- Number of establishments
- Temporal aggregation
- Buying rates

Consumer profile
- Country of origin
- Code of residence card users
- Gender
- Age
- Purchasing power
- Preferences and interests

With this information and knowing the particular scope of data source, we could make a structure to breakdown variables such as use in the SNA-Mexico.
For example: Tourism Consumption (Million of Mexican pesos)

Example:

- Total Tourism Consumption: $2,459,859
- Domestic Tourism Consumption: $1,924,610
- Inbound tourism consumption: $333,724


A distribution rate for Inbound Tourism Consumption (ITC) is identified by Point-of-Sale Terminals:

- Hotels 25%
- Restaurants 15%
- Air transportation 35%
- Land transportation 10%
- Travel agencies 10%
- Car leasing 5%

\[ \text{DISTRIBUTION OF TOURISM PRODUCTS CONSUMPTION} \]
### Taking advantage of new data

<table>
<thead>
<tr>
<th>Tourism products</th>
<th>Inbound</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>$333,724</td>
</tr>
<tr>
<td>Hotels</td>
<td>$83,431</td>
</tr>
<tr>
<td>Restaurants</td>
<td>$50,059</td>
</tr>
<tr>
<td>Air transportation</td>
<td>$116,803</td>
</tr>
<tr>
<td>Land transportation</td>
<td>$33,372</td>
</tr>
<tr>
<td>Travel agencies</td>
<td>$33,372</td>
</tr>
<tr>
<td>Car leasing</td>
<td>$16,687</td>
</tr>
</tbody>
</table>

### Assumptions

**Not all transactions** from the visitant or consumers are **purchased in cash**, because of that, this data has to be **related** to other **studies**, such the visitant **profile surveys** or **opinions of experts** in the field of tourism behavior, with the condition that these opinions can be validated through best practices¹.

### Example: Consumption structure and payment systems

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<th>Credit / Debit card</th>
<th>Cash</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Business</td>
<td>Religious</td>
<td></td>
</tr>
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<td>NA</td>
<td></td>
</tr>
<tr>
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**Assumptions ...**

- The **holiday tourism** has large payments by credit and debit cards and less in cash.

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**Assumptions ...**

- The 100% of spending from **business tourism** is paid with credit and debit cards, this is because usually are job duties and this spending has to be checked.
from religious tourism, the main part of their spending is in cash, for example, the ones who visit "La Villa" don't pay accommodation and hire freight truck transportation from their residences.

In order to take full advantage of the TSA-Mexico data, it is necessary to be attentive to the changing environment of data and consider the opinions of researchers who perform similar exercises in other fields.