COVID-19 Impact on Transportation

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An unprecedented global crisis is affecting our economies and lifestyles. Transport sector is being deeply affected by the mobility restrictions and the activity level drop. The actual implications for each sector and the extent of the aftermath changes are still unknown. All transportation markets are expected to experience deep changes facing sanitary processes, new mobility patterns and declining economy. To understand and measure the impact of COVID-19 in the transportation sector is key for a better response facing new challenges.
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COVID-19 Outbreak
Global transportation impact
Economic impact

Different estimations for 2020 GDP growth rate published in March-April 2020

Global 2020 GDP growth rate estimations by publishing date


Deemed global GDP decrease
2% to 3%
In 2020

Uncertainty
Big dispersion in the forecasted GDPs

Downward correction
Early estimations were, in general, more optimistic than late ones

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Impact in mobility is different in each country/region, depending mainly on the actions taken by governments regarding restrictions

- High impact ~80% (Italy, Philippines, India, Spain)
- Low impact ~20% (Sweden, Taiwan, Finland, Estonia)
- Early impact ~February (Hong Kong, Cambodia, Korea)
- Late impact ~April (Russia, Japan, New Zealand)

In the UK, there has been a big decrease in passengers in urban rail – up to 95%

High-speed rail is expected to absorb part of the flights’ demand

Traffic decrease in highways as high as 80%

As a result, a compensation to concessionaires is expected, most probably by a contract extension

Heavy vehicles less affected than light (~40%)

Sources: Apple, GDT Spain, Global Railway Review

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Air traffic & Tourism

Scheduled flights: 2020 variation compared to 2019

Globally 65% less flights in April
EU 59% less flights in 2020
Globally 50% expected income reduction in 2020

What to expect
• Only regional/national trips in the short term
• Strengthened safety measures/restrictions in transportation
• Fear-related discouraged travelling
• Recovery scenarios are projected towards the 2nd semester of 2021
• Expected full recovery only once the vaccine is available
COVID-19 Impact on transportation

Lockdown

- Sectors such as automobiles and textiles are the most affected, however food and e-commerce distribution are rising
- Air cargo capacity has dropped due to decreased passenger flights. 50% of global air freight is typically transported by passenger aircraft
- Governments are conducting measures at customs to enhance trading, allowing deferrals or reduction of payments and extending licenses

Ports

- COVID-19 has coincided with USA vs China trade war
- Port storage capacity problems
  - The inactive containership fleet in 2020 is expected to exceed 3,000 TEUs - 13% of the world’s fleet unused
  - Chinese ports make up a third of the global volume. In 2020, a decrease between 2-5% TEUs is expected for China ports
  - The cancellation of more than 250 stopovers is estimated, representing the elimination of up to 30% of the total capacity on the most affected routes

After Covid-19

- Global bottleneck in supply chains during the crisis: new microsystem-based operation. This large increase in distribution implies increasing storage capacity
- In 2020, global trade is expected to decrease between 13% and 32%
- Intermediaries in the distribution chains will be reduced
- There is an opportunity for driving digital transformation
- E-commerce has grown during Covid-19 and is facing new challenges: increasing capacity to absorb demand and get to the customer sooner

Sources: WTO, Alphaliner, Forbes

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The case of Spain
Economic impact

Real GDP (Index 2015=100)

-6% to -10% GDP growth rate expected for 2020

+20% of GDP comes from activities directly affected

18-20% Unemployment rate
-31% in imports
-27% in exports
-25% investment

Sources: Eurostat, INE Spain, Spanish Government, Bloomberg

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Easing the lockdown

Progress between phases will be determined with objective criteria based on markers that will show the disposition of each province: healthcare capacity, both primary care and hospital care, and the number of ICU beds in each of the territories; the epidemiological situation in the area, with diagnoses and identification of the pandemic; implementation of joint protection measures in public spaces, and mobility and socioeconomic data.

Sources: BOE, Spanish Government Health Ministry

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Road traffic

Compensations to road concessionaires for the traffic drop are not clearly specified in all contracts, allowing potential compensations.

**Decrease in roads traffic due to:**
- Restrictions to mobility
- Decrease in economic activity

**Potential compensations:**
- Extending the concession period by 15%
- Modifying those economy-related clauses incorporated in the contract

**Opportunities**
- Flight restrictions diverting traffic to roads
- Increase in suburban and rural living around cities
- Relocation of production to national factories
- Changes in logistic model - truck centered chains

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**Traffic variation respect to equivalent day**

<table>
<thead>
<tr>
<th>Weekends</th>
<th>Easter</th>
<th>Light Vehicles</th>
<th>Heavy Vehicles</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>9-Mar</td>
<td>16-Mar</td>
<td>23-Mar</td>
<td>30-Mar</td>
<td>6-Apr</td>
</tr>
<tr>
<td>0%</td>
<td>-100%</td>
<td>-80%</td>
<td>-60%</td>
<td>-40%</td>
</tr>
</tbody>
</table>

**Opportunities**

- Light vehicles: -80% of equivalent day on average
- Heavy vehicles: -40% of equivalent day on average

Sources: Ministry of Interior, DGT, BOE

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## Urban mobility

### What is about to happen
- Social distancing
- Slow recovery of trip volumes
- Trend to individual vehicles (car and bicycle)
- Public Transport (PT) capacity restriction up to 30%
- Risk of increased traffic and consequent pollution

### What is needed
- Increase in PT frequency for maintaining system’s capacity
- Temporary measures as the recovery unfolds – agility and adaptability
- Larger dedicated space for pedestrians and cyclists

### What is expected
- Decrease on trip rates as increased:
  - Teleworking
  - E-commerce
  - Online education

### Opportunities
- Impulse modal shift to micro-mobility and PT
- Reformulate infrastructures and public space usage in cities
- Achieve safe, healthy and sustainable mobility

### Driving, public transport and walking variation in Madrid

<table>
<thead>
<tr>
<th>Date</th>
<th>Driving Change</th>
<th>Public Transport Change</th>
<th>Walking Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>8-Mar</td>
<td>-100%</td>
<td>-100%</td>
<td>-100%</td>
</tr>
<tr>
<td>15-Mar</td>
<td>-90%</td>
<td>-90%</td>
<td>-90%</td>
</tr>
<tr>
<td>22-Mar</td>
<td>-80%</td>
<td>-80%</td>
<td>-80%</td>
</tr>
<tr>
<td>29-Mar</td>
<td>-70%</td>
<td>-70%</td>
<td>-70%</td>
</tr>
<tr>
<td>5-Apr</td>
<td>-60%</td>
<td>-60%</td>
<td>-60%</td>
</tr>
<tr>
<td>12-Apr</td>
<td>-50%</td>
<td>-50%</td>
<td>-50%</td>
</tr>
<tr>
<td>19-Apr</td>
<td>-40%</td>
<td>-40%</td>
<td>-40%</td>
</tr>
<tr>
<td>26-Apr</td>
<td>-30%</td>
<td>-30%</td>
<td>-30%</td>
</tr>
</tbody>
</table>

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*Sources: Apple*

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Air traffic & tourism

Sources: Eurocontrol, INE, Exceltur

Tourism

- Big shock in the sector’s economy for drop in demand volumes
  - Short-term: restrictions to mobility
  - Medium-term: decrease on international tourism
- Internal tourism expected to increase due to medium-term international flights restrictions
- Majority of tourism movements will be carried out by road and train
- Potential space restrictions in accommodations

Flights’ recovery plan

- Stage I - Only within Spain
- Stage II - European routes
- Stage III - Long-distance flights

Scheduled flights: 2020 variation compared to 2019

Flights’ recovery plan

Current scheduled flights

5% of 2019 volumes

Variation

Scheduled flights: 2020 variation compared to 2019

Flights 2019

Flights 2020

0 1,000 2,000 3,000 4,000 5,000 8-Mar 15-Mar 22-Mar 29-Mar 5-Apr 12-Apr 19-Apr 26-Apr 3-May

13% employment in Spain generated by tourism

81% of GDP in Spain generated by tourism

2020 touristic GDP fall forecast compared to 2019

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Conclusions & Advisian approach
## Conclusions

### Global impact

- **National policies** are likely to prevail over regional coordination.
- The **unprecedented situation** is expected to have big impact in all economies, setting a new scenario for production, consume and transportation.
- Changes in **transport users’ behavior**: rise in teleworking, e-commerce, individual modes, suburban living.
- The actual effect in **economy** is still unclear, but global GDP is expected to fall between 2% and 3% in 2020.
- **Air transport** is among the most effected sectors (expected fall ~60%), together with tourism (~45-70%).
- **Land transport** will keep being affected by the fall in the economic activity even when restrictions to mobility end.
- **Logistic crisis** is defying the freight market and pushing potential changes to the production model. Changes in production and consumption trends may favor subsegments.

### Impact in Spain

- **Spanish economy** will be among the most harmed ones, as a reasonable segment of it is directly affected.
- Mobility restrictions will last at least until **mid/late June**.
- In national roads, **Light vehicles** traffic decreased 80% and **heavy vehicles’** 40%. Road traffic will start recovering as the restrictions ease, but the recovery timeline and final volumes will vary on each route.
- Compensation for **road concessionaries** for traffic loss is still under negotiation.
- **Transport capacity** will be reduced because of sanitary restrictions (all modes and sectors).
- **Urban trip** rates are expected to decrease, facing new mobility challenges and opportunities.
- **Air transport** and tourism will be deeply hit by the crisis with a long recovery time.
- **State role** will be essential for the recovery of all sectors.

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