CO₂ Footprint of Spanish Households:
Enhancing Measurement through Economic Analysis and Big Data

24%
of Spain's
CO₂ emissions

into the atmosphere are **direct emissions** from **Households,** due to the use of **private vehicles, heating** and **cooking at home.**

However, their **total carbon footprint** should also **include embodied emissions** from (e.g.) **the food that they eat** or **the clothes they wear.**
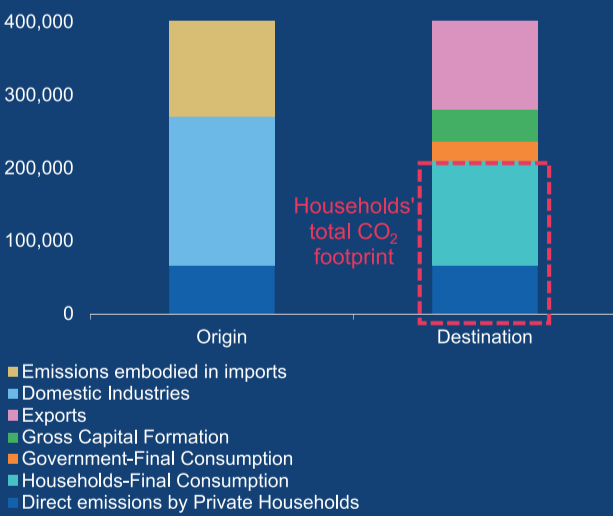
BBVA Research estimates that all **households' emissions** account for

52%

of the **CO₂ emissions produced** and **imported** by the **Spanish economy.**

Regarding **indirect emissions, food, mobility** and **shelter** are the components with **the largest weights.**
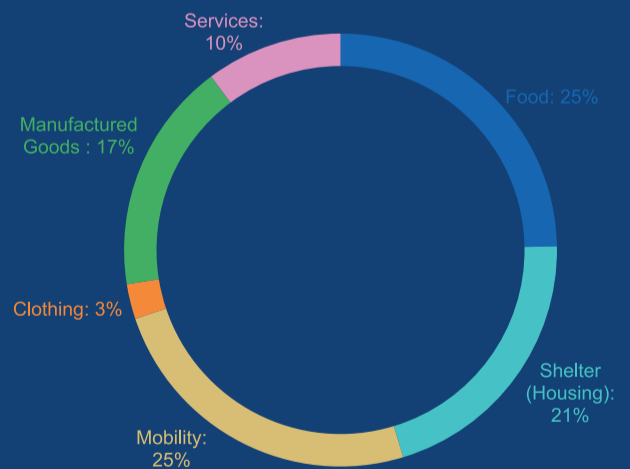
SPAIN. CO₂ EMISSIONS BY ACTIVITY. ORIGIN & DESTINATION (MILL. TM. 2016)

400,000
300,000
200,000
100,000
0

Origin   Destination

Households' total CO₂ footprint

- Emissions embodied in imports
- Domestic Industries
- Exports
- Gross Capital Formation
- Government-Final Consumption
- Households-Final Consumption
- Direct emissions by Private Households

Source: BBVA Research calculations with INE data.

INDIRECT EMISSIONS IN HOUSEHOLDS FINAL CONSUMPTION (%)

Services: 10%
Manufactured Goods : 17%
Clothing: 3%
Mobility: 25%
Food: 25%
Shelter (Housing): 21%

Source: BBVA Research.

Big Data analysis shore up the measurement of **the carbon footprint** enhancing both **update and granularity.**