



# **JATO AUTOMOTIVE PRICE INDEX**

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## Summary

**The automotive market has undergone major changes in recent years, prices evolve differently and more dynamically, the analysis of price trends therefore assumes an even more central role. The objective of the JATO automotive price index is to be a leading indicator that provides valuable information on the direction and magnitude of price changes at a country market level, providing monthly indications on inflation.**

**Each month, the following metrics will be released:**

- Monthly rate changes
  - Annual rate of change
  - Year to date change
  - Price Index
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## Metric description

### Introduction

The objective of the proposed indexes is to monitor how prices, adjusted for equipment value changes, change at the country market level. The JATO Automotive Price Index will be released for the following countries: Germany, Spain, UK, France, and Italy.

To track the value of the equipment of a car, JATO Value Analysis is used: each item of standard equipment, or other factors, e.g. power, is assigned a value and the total value of the car equipment will be the sum of these values. With JATO Specifications we have all the specifications of available car versions and we can track when an option becomes part of the standard equipment and vice versa. This allows us to take into account equipment value changes and isolate price changes which are “pure”, i.e. not justified by an associated modification of the value of the equipment.

The values assigned to the various items are taken from the JATO Value Tables, created and updated by JATO experts.

### Methodology

In JATO solutions, each version of each car model is associated with a key, UID, which is continuous over time and with JATO Specifications database it is possible to monitor the history of prices and equipment and compare the data over time.

For each version (UID), monthly retail price and equipment value are extracted and updated in the last day of the month.

The following data are monitored each month to generate the index:

- Retail Price of the current month for UID
- Retail Price of the previous month for UID
- Standard Equipment Value of the current month for UID
- Standard Equipment Value of the previous month for UID

The type of Retail Price used is the one that is taken as the reference price in the country that we also analyze in the JATO Price Tracker, so the type of price could include delivery charges like Italy and Spain or not include them like France and Germany, while other types of taxes and incentives (e.g., CO2) are not included.

The index is computed only for UIDs active at the end of the current and previous month, as we are tracking changes at the version level from one month to the next. The UID level information is then aggregated and weighted at the country level using JATO's proprietary ModelMix solution, which provides registrations volumes at the version level for each vehicle. The high level of granularity of the data collected to calculate the metrics is one of the strengths of JATO's approach.

## JATO Automotive Price Index

We consider the following defined at the UID level:

- **Delta retail Price:** Retail Price current month – Retail Price Previous month
- **Value Equipment:** Sum of the value of each item in the standard equipment
- **Delta Value Equipment:** Value Equip. current month – Value Equip. previous month
- **Pure price change:** Delta Retail Price – Delta Value Equipment
- **Percentual pure price change:** Pure Price change/Retail Price Previous Month

The methodology applied is derived from the JATO Price Tracker solution, which provides detailed information on price changes at the model level for any market of choice.

Example: A particular version UID in one month has a retail price increase of 736 euro (example below 2021/11) and in the same month the equipment value is increased by 133 euro because they increased the standard display size and add other luxury items to the standard equipment, the pure price change will be  $736-133=603$  euro. If on the contrary the value equipment is decreased by 208 euros without any price change the pure price change will be -208 euros (in the example below 2021/08).

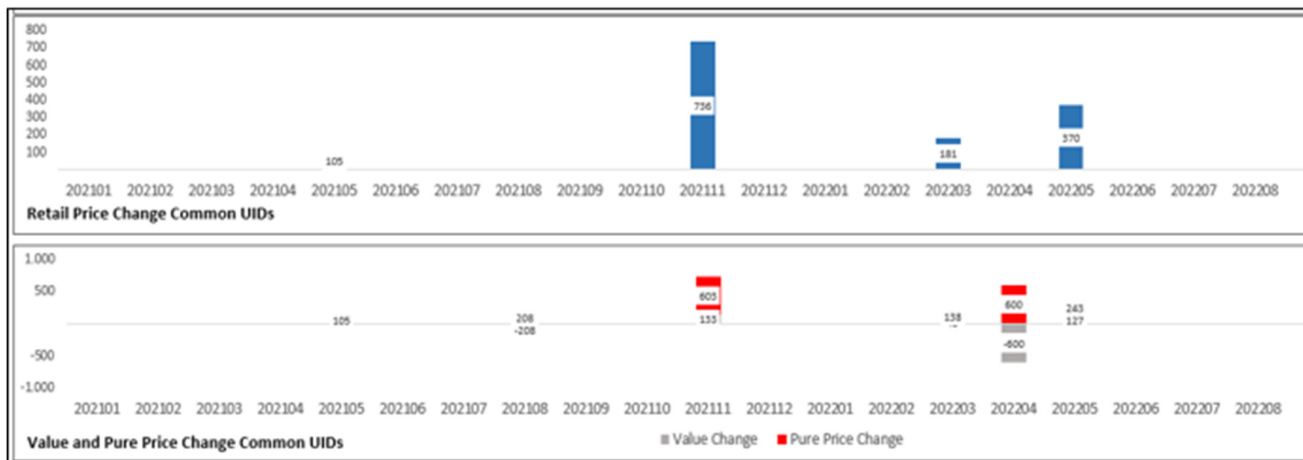


Figure 1. Example from Price Tracker

The four monthly metrics released in JATO Automotive Price Index will be:

- **Monthly rate change:** corresponds to the registrations volume weighted pure price change of the current month at market level
- **Annual rate change:** the pure price change compared to the reference month in the previous year, used to monitor how the price has changed over the course of a year. equal to the compound sum of the last 12 monthly rate changes.
- **Year to date change:** the pure price change of the reference month compared to January of the current year, equal to the compound sum of the monthly pure price changes taking January prices and equipment values as reference to the current month.
- **Price Index:** indicator used to express the data in relative terms to the reference (=100). In this case the reference date is 1<sup>st</sup> January 2022. It means that the data has been normalized so that the index value for the date 01/01/2022 is exactly equal to 100 for each country, and all other values are expressed in relation to this reference value.

## JATO Automotive Price Index

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### Notes

- New versions appearing in the market do not contribute to current month index but will be taken into account in the following months.
- Within the analyses, we only consider vehicles that have been coded to the “full specs” level, this indicates that all the data that is possibly available for the vehicles segment set has been coded.
- The weights are updated every month. The reweighing of the versions based on registrations volumes is performed monthly.

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# Contacts

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