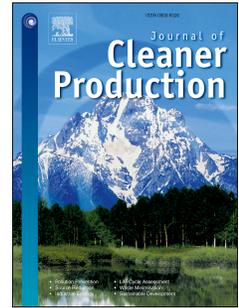


# Accepted Manuscript

New cars and emissions: Effects of policies, macroeconomic impacts and cities characteristics in Portugal

Daniel Magueta, Mara Madaleno, Marta Ferreira Dias, Mónica Meireles



PII: S0959-6526(17)32917-7

DOI: [10.1016/j.jclepro.2017.11.243](https://doi.org/10.1016/j.jclepro.2017.11.243)

Reference: JCLP 11382

To appear in: *Journal of Cleaner Production*

Received Date: 16 May 2017

Revised Date: 23 November 2017

Accepted Date: 29 November 2017

Please cite this article as: Magueta D, Madaleno M, Dias MF, Meireles M, New cars and emissions: Effects of policies, macroeconomic impacts and cities characteristics in Portugal, *Journal of Cleaner Production* (2018), doi: 10.1016/j.jclepro.2017.11.243.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

## **New cars and emissions: effects of policies, macroeconomic impacts and cities characteristics in Portugal**

### **Abstract**

The Paris Agreement on climate change is the first international climate agreement that extends mitigation obligations to all countries. Accordingly, the EU has already put in place some policy measures to decrease CO<sub>2</sub> and GHG emissions from cars, e.g. the obligation of each Member State to provide information on the fuel-efficiency of new passenger cars, namely on fuel consumption and CO<sub>2</sub> emissions. In Portugal, in 2013, the transport sector was responsible for 33.3% of energy consumption with the road transport accounting for 95% of this percentage. Furthermore, the transport sector was also responsible for 34.7% of CO<sub>2</sub> emissions, a value highly concentrated in the major cities. To improve significant reductions on emissions in the transport sector, the Government has introduced several energy efficiency measures. Although there are many countries that have introduced special programs aimed at increasing vehicle replacement through new low-carbon vehicles purchases, little attention has been paid to their impact on sales and prices. Using a completely unexplored database of sales regarding new cars sold in Portugal during the period of 2002 and 2016 we have explored the evolution of average CO<sub>2</sub> emissions and sales considering different types of new cars sold (gasoline, diesel and electrical) in terms of descriptive statistics. We have also applied multiple regression models using macroeconomic variables able to justify changes in terms of both sales and emissions. Results demonstrate that including macroeconomic effects, household characteristics and city specificities are important for both emissions and sales explanatory behaviour that allow inferring how policy makers should redirect attention when formulating new policies regarding environmental performance.

**Keywords:** Transport policies, Carbon emissions, New car sales, City characteristics

متن کامل مقاله

دریافت فوری ←

**ISI**Articles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات