**Title of the Manuscript**

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(Example) Α panel data set of the 28 EU countries, over the period 2000-2018 (material recycling) and 2010-2017 (materials circularity) was employed. The average rate of circularity within Europe is 8.6% but excluding Netherlands, which is an outlier, the average circularity rate drops to 7.9% (Table 1).

**Table 1**. Average circularity rates for the 28 EU countries

|  |  |  |  |
| --- | --- | --- | --- |
| Countries | Score | Countries | Score |
| Austria | 9.2% | Italy | 15.0% |
| Belgium | 16.6% | Latvia | 4.1% |
| Bulgaria | 3.0% | Lithuania | 4.0% |
| Czechia | 6.7% | Luxemburg | 14.4% |
| Croatia | 3.7% | Malta | 6.6% |
| Cyprus | 2.2% | Netherlands | 26.9% |
| Denmark | 7.9% | Poland | 10.8% |
| Estonia | 12.4% | Portugal | 2.1% |
| Finland | 9.3% | Romania | 2.3% |
| France | 17.9% | Slovakia | 4.8% |
| Germany | 11.0% | Slovenia | 8.2% |
| Greece | 2.1% | Spain | 8.7% |
| Hungary | 5.9% | Sweden | 7.1% |
| Ireland | 1.8% | United Kingdom | 16.1% |

We tried to identify the main socio-economic determinants of inter-country differences in materials recycling and circularity rates. In particular, the empirical findings indicate that GDP per capita has a positive impact on both materials recycling and circularity rates within Europe indicating that richer economies, as expected, seem to take more actions towards recycling and circularity. Fertility rate has a positive impact on recycling and circularity rate. Higher fertility rate indicates more people in the young cohort who might be more likely to carry our pro-environmental behavior. The impact of education is also positive to recycling indicating that countries with higher educated people ratios tend to recycle more. On the contrary, the level of research and development expenditures is focused on industry and so they matter for materials circulating. R&D programs are essential for the advanced necessary technology of waste and wastewater management, since without scientific research and development several environmental issues may arise. Environmental taxes, even if become a much-debated issue in environmental policy, seem to significantly matter in the level of materials recycling and circularity. Finally, urbanization process is used as a proxy of the level of materials' recycling and circulating.

**Key words**: circular economy; recycling; time series analysis (**up to 5 key words**)

**JEL** (**optional field**)**:** O13; Q56

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