

A decomposition of CO₂ production emissions in the Andalusian economy

Topic: Consumer responsibility and households' carbon emissions

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The aim of this paper is to analyze the energy sector in Andalusia, a Spanish region, and its importance from the viewpoint of final energy consumption, trying to determine which demands are the most costly to satisfy in terms of emissions of pollutants to the atmosphere. To do this, we apply an additive multiplier decomposition methodology to the Andalusian Social Accounting Matrix for the year 1995. The method implemented allow us disaggregate the Andalusian energy sector's revenue-generating process into different effects depending on the source of the demand. To gain a better understanding of the behaviours of the different branches of the economy, we divide Andalusian productive activities into two groups, which we call subsystems (energy subsystem and complementary subsystem). We then apply the multiplier decomposition methodology to each one separately. This way, we can identify the influence that the final demand of each of these groups has on income generation and energy sector emissions in the Andalusian economy. The information obtained from this exercise allow know which sectors are the final main responsible of the emissions, and confirm that Construction and some branches of the services sector are the most costly in terms of CO₂ emissions.