

## **Household Consumption and CO2 Emissions: The Influence of Technological factors and Composition of Final Demand**

Topic: Consumer responsibility and households' carbon emissions

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Obviously, there is a fundamental relationship between the composition and amount of household final demand and CO2 emissions generated by an economy. Therefore, a way for analyzing the evolution of these emissions is to study the influence of technological factors and those related to the formation of demand. This analysis can be enriched by adding other decompositions that allow simultaneous studies of determinants of demand effects. Thus, in this work, the evolution of CO2 emissions is break between the effects of technological changes and effects of change in final demand, decomposing the latter into four factors: the consumption patterns of households, income distribution, economic growth and population. In this way, it manages to combine qualitative factors of change in consumer habits with factors that explain the scale effect involving economic development and the increasing number of consumers.

The way to analyze the influences of these factors will be the decomposition of the evolution of CO2 emissions in the sum of effects of variations in each of these factors, using the Structural Decomposition Analysis (SDA). To better capture the effects of these factors, will be considered European countries and United States, by reference to the years 1995, 2000 and 2005.