

**Exploring industry dynamics and their environmental and social implications in
selected European countries
A case study of Italy and Greece**

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ABSTRACT

Industry has been going through a period of changes worldwide, in response to global challenges in all three dimensions of sustainable development, the economic, the social and the environmental one. In the European Union (EU), industrial policies have been developed and implemented in order to reverse the declining role of industry in economy and to achieve goals for sustainable development, combining industrial growth with more jobs but fewer environmental repercussions. In order to trace a path towards sustainable and inclusive industrial development, it is important to discover the reasons behind any progress or delay in the evolution of economic, environmental and social indicators.

This study focuses on the industries of two EU countries, Italy and Greece, during the period 2000-2011, and tries to explain the evolution of carbon emissions and employment, two indicators specifying the environmental and social dimension of sustainable development.

The decomposition analysis is used for this purpose as it is widely recognised as a powerful tool for detecting the driving factors behind changes in various aggregate indicators over time. The decomposition method used relies on the Log Mean Divisia Index I and the developed models comprise some common or closely related drivers, in order to offer useful insights into relevant complementary and/or antithetical effects on the two indicators of sustainable industrial development.

The results obtained showed that for the industries of Italy and Greece, the consumption intensity and the resources intensity, i.e. the energy intensity for CO₂ emissions and labour intensity for employment, are the main driving factors which shaped the total change of the environmental and the social indicators.