

Socioeconomic Typologies for Portugal: a look at the present and the future through the lens of social and environmental development

Gabriel Zamboni, Jose Victor Borges and Eduardo A. Haddad

(Extended) Abstract. The economy of Portugal is primarily centered around activities such as wholesale and retail trade, accommodation and food services and manufacture of food products, beverages and tobacco products of GDP. Its geographic location and incentives in sectors relevant to the era of mercantile capitalism, such as navigation, allowed the country to become a global economic power in the 16th Century. Just like in the past, mapping the advantages that regions and industries within a country possess is of utmost importance for policymakers and investors to consider the development of the economy in the present and future. A widely used methodology in regional economics is input-output analysis, which enables the understanding of how stimuli in the final demand of each sector generate effects that propagate through the production chain, affecting the entire economy due to sectoral interconnection.

In this sense, this work aims to generate an “X-ray” of Portugal’s economy with metrics for each of its sectors and regions considering social, regional and environmental aspects. Provided with the interregional input-output matrix of the country for 2017, we developed a typological analysis based on indicators calculated at the regional and sectoral levels - 7 regions of Portugal (NUTSII) and 65 sectors (CAE Rev.3). These indicators were designed to allow a description of the economy in five dimensions: present economic growth, future economic competitiveness, social inequality, regional inequality and sustainable economy. For the sake of conciseness, we simply call these dimensions “present, future, social, regional and environmental”.

The main contribution of this work is to generate a multidimensional view about the advantages of each region and each sector in Portugal in the predefined dimensions of analysis, revealing potential trade-offs policymakers may face. In a world where economic development that takes into account social and environmental aspects is gaining increasing importance, a stylized description of how sectoral and regional stimuli affect socio-environmental indicators is of utmost value for strategic planning in both the public and private sectors.

The main results are the five dimension indices for Portugal’s 7 regions and 65 sectors. They show how the interconnections of the country’s productive structure affect some aspects of the Portuguese economy and society. The most developed regions, Norte and the Lisbon Metropolitan Region, have the best indicators for current economic activity and competitiveness, with the exception for gross value added (GVA) generation. These regions also stand out in employment for women. However, they are the most intensive in emissions and energy consumption. The Portuguese islands, Madeira and Azores, have good indicators for employment generation, particularly for immigrants.

Economics sectors such as “Advertising and Market Research” and public services (electricity and water treatment) and manufacturing (paper products, metal products) have the largest economic multipliers. Services such as education, public administration and household activities have the largest GVA generation; this last one also employs proportionally more women. Other services, such as “Human Health”, “Architectural and

engineering activities” and “Motion picture, video and television programme production” have the best commercial balance. Results also show that the sector “Employment Activities”, which encompasses various temporary jobs, plays a significant role in social aspects. It has one of the biggest Employment Generator and employs proportionally more immigrants and young people, and also generates more GVA outside the most developed regions. Upstream sectors such as “manufacture of coke and refined petroleum products”, “Manufacture of other non-metallic mineral products” and “Electricity, gas, steam and air conditioning supply” have the worst environmental indicators related to the generation of emissions.