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Total Water Consumption - A Computable General Equilibrium Experiment for the Brazilian's Economic Sectors

The production of virtually all products requires water. Due to its very own nature, water is a unique input. Global economic growth puts pressure on local demands for water. This study investigates the total water consumption in Brazil, a country that benefits from a significant comparative advantage in the area, by economic sector, in scenarios of greater global demand for the country's domestic products. Two export patterns are established. The first pattern is the current Brazilian one, focused on primary production, and the second pattern is one that favors service sectors, in line with a more developed country. For this purpose, a Computable General Equilibrium model (CGE), ORANI-G, adapted to the Brazilian's Input-Output Table (2015) and the Environmental Economic Accounts of Water in Brazil (2013-2015) is used. Variations in total water consumption outweighed the variations in demand for capital and labor in all sectors. In addition, variations in total water consumption exceeded variations of the activity level of each one of the sectors. The Extractive sector displayed the greatest increase in water consumption, and its variations of demand for capital and labor and activity level were also quite high. The Agricultural sector, however, the largest water consumer sector in the world, displayed low variations in total water consumption, with variations lower than those displayed by sectors such as Commerce and Transport, even in export patterns that maintain the current primary production focused character.