Measuring the potential impact of developing the lithium value chain in Argentina: An Input-Output analysis

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Argentina has a privileged situation for the Lithium Value Chain (LVC) development since it accounts for 22 percent of worldwide lithium resources and a great number of exploration projects in lithium extraction. The objective of this paper is to present and analyze the potential quantitative socioeconomic impacts of the development of the LVC in Argentina. To address this purpose, the elaboration of a multi-sectoral (35 sectors) Input-Output matrix with its associated Satellite Account of Employment (SAE) was developed for 2017. In order to productive activities, the analysis of LVC is disaggregated in 6 sectors: lithium extraction, lithium cells for lithium-ion batteries, lithium-ion battery packs, utility scale solar panel installation; electric vehicles and renewable electricity generation. The complementary accounting information of lithium enterprises about cost and sales, academic papers and national government documents are some of an essential input for the generation of these sectors. The use of different types of labor sources can amplify the number of jobs in the economic activity in Argentina because of the relevance of informal jobs in the labor market. The chosen year has to be the most recent and stable one for the economy in order to have no crisis, no pandemic and no war. The Input Output matrix and the SAE are the calibration base for an Input Output model used as simulation tools. Three prospective scenarios about the LVC development in 2030 have been designed taking into account official targets for sectors which could be a source of demand for lithium and the possibility for disaggregating the impacts according to investment and production phase. Results highlight that under all scenarios net socioeconomic impacts are positive until 2030. Spillover effects through the economy become significant with a deeper ambition on the development of the LVC, particularly with large scale lithium projects that demand inputs and services from other sectors and, in a minor way, when downstream LVC sectors start producing by 2030.