STRUCTURAL VULNERABILITIES AND REGIONAL PERSISTENCE IN AN OPEN ECONOMY: CLASSIFYING PRODUCTIVE TRAJECTORIES USING SSA-A WITH AN INTERREGIONAL INPUT–OUTPUT EXTENSION. EVIDENCE FROM CHILE (2013–2023)

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Persistent territorial disparities in open economies are strongly shaped by structural conditions: the initial productive structure, intersectoral and interregional linkages, and agglomeration dynamics that can reinforce cumulative advantages over time (Hirschman, 1958; Isard, 1951; Duranton & Puga, 2004; Combes, Duranton, Gobillon, & Roux, 2011). In regional economics, these forces interact with territorially embedded assets, institutional settings, and what has been conceptualized as territorial capital, influencing both the spatial distribution of activities and the diffusion of growth (Capello, 2015; Capello, 2007; Capello & Nijkamp, 2009). Chile provides a particularly informative setting for a structural diagnosis of persistence. Long-run evidence indicates sustained spatial concentration of output and persistent regional gaps in GDP per capita, while the economy exhibits marked specializations and heterogeneous capacity to generate and retain value added (Banco Central de Chile, 2022; SUBDERE, 2021; INE, 2022).

A key structural tension in this context is that territories may be central to gross production or exports while capturing a smaller fraction of higher-value activities. Interregional IO/TiVA evidence for Latin America highlights that services value added embodied in exports tends to follow domestic urban hierarchies; in Chile, services value added associated with exports concentrates strongly in the Santiago Metropolitan Region, revealing systematic internal "leakages" from peripheral production spaces toward core service hubs through production linkages (Haddad & Araújo, 2021).

This extended abstract proposes an operational regional diagnosis that classifies Chilean regions' productive trajectories between 2013 and 2023 using an adjusted shift-share framework (SSA-A) and outlines an interregional input–output (IRIO) extension to strengthen the interpretation of trajectory types in terms of productive articulation and value-added capture. The core contribution is the SSA-A-based classification. The IO component is explicitly conceived as an interpretive

extension: it complements, but does not replace, the decomposition-based typology by connecting trajectory patterns to mechanisms of linkage density and internal value-added reallocation documented in interregional IO/TiVA research (Miller & Blair, 2009; Haddad & Araújo, 2021).

The central research question is: to what extent have Chilean regions experienced changes in their productive structure between 2013 and 2023, and what types of structural trajectories emerge once regional change is decomposed into components associated with (i) national dynamics, (ii) sectoral composition, and (iii) region-specific performance. The analytical focus is not on describing growth as an endpoint, but on classifying trajectories to identify patterns consistent with persistence, specialization-linked exposure, and heterogeneous adjustment capacity, in line with place-sensitive debates on regional development and the uneven geography of economic opportunity (Rodríguez-Pose, 2018; Capello & Nijkamp, 2009).

The empirical strategy has two components. First, SSA-A is implemented as a trajectory-classification device for the 16 regions over 2013–2023. Observed change is decomposed into interpretable components and used to allocate regions into trajectory categories under explicit criteria, enabling transparent cross-region comparison. The approach builds on the shift-share tradition and its reinterpretations (Dunn, 1960; Esteban-Marquillas, 1972), integrates spatial structure and decomposition taxonomies (Nazara & Hewings, 2004), and is consistent with recent developments that motivate richer shift-share formulations and clearer classification logics (Montanía, Márquez, Fernández-Núñez, & Hewings, 2021; Montanía, Márquez, Fernández-Núñez, & Hewings, 2024).

Second, an IRIO-oriented extension is proposed to enrich the interpretation of SSA-A typologies through linkages and value-added capture. In an input–output framework, backward and forward linkages approximate the density of productive articulation (Leontief, 1936; Chenery, 1956; Miller & Blair, 2009). A trade-in-value-added reading helps distinguish gross production associated with external final demand from effective local value-added retention (Haddad & Araújo, 2021). This mechanism-oriented lens is consistent with the idea that agglomeration and territorial spillovers can shape regional growth and persistence beyond compositional effects (Capello, 2007; Duranton & Puga, 2004).

The study follows a discrete-moments comparison logic. The objective is to identify structural change and persistence between two points rather than model annual dynamics. The unit of analysis is the region (16 regions), and the sectoral dimension is represented through an operational aggregation that preserves accounting consistency and interpretability. The IO extension is staged and conditional on data construction and validation; therefore, the main deliverable is the

SSA-A typology, while the IO extension provides a structured pathway to interpret typologies via linkages and value-added capture mechanisms.

Expected results are organized at two levels. At the main level, the study delivers an SSA-A typology for Chile's 16 regions (2013–2023), separating the relative role of national dynamics, sector-mix exposure, and region-specific performance, thereby supporting a structural discussion of persistence and differentiated adjustment. At the extension level, the study links typologies to IO/TiVA mechanisms, with the interpretive expectation that less persistent trajectory types will be more consistent with stronger productive articulation and greater local value-added retention, whereas persistent trajectories associated with specialization may exhibit weaker linkage density and/or weaker value-capture patterns, even when export-oriented production is high (Miller & Blair, 2009; Haddad & Araújo, 2021; Capello, 2015).

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