



Article

Dependency or subsidization? An input-output analysis of the interconnectedness of regional growth models in Italy

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Abstract

This article demonstrates the applicability of the growth model framework at the regional level. Focusing on Italy as a paradigmatic case of persistent regional inequalities, we test two theories of center-periphery relations between Northern and Southern Italy: the *dependency* theory and the *subsidization* theory. Using EUREGIO regional input-output tables between 2000 and 2007, we decompose the GDP and GDP growth of Italian regions into final demand components and economic sectors. The results highlight the importance of distinguishing between static and dynamic analyses. The former reveal a greater reliance of the economy of the Southern regions on the public sector, corroborating the subsidization perspective. By contrast, the latter indicate that in 2000–2007 Southern Italy's GDP growth was driven by low value-added exports to Northern regions, buttressing the Gramscian dependency argument. We link changes in regional growth models to the impact of EU fiscal policy rules.

Key words: regional inequality; Europe; dependency; public expenditures; economic growth.

JEL Classification: P51 Comparative Analysis of Economic Systems, R12 Size and Spatial Distributions of Regional Economic Activity, R15 Econometric and Input-Output Models

1. Introduction

The last decade has seen the emergence of a new approach to comparative political economy (CPE), the Growth Models (GM) perspective, which analyzes the dynamic diversity of models of capitalism by highlighting different demand drivers of growth as opposed to different sets of interlocking 'supply-side' institutions as in the Varieties of Capitalism (VoC) perspective (Hall and Soskice 2001; Cardenas and Arribas 2021; Baccaro et al. 2022). So far, the GM approach has inspired research in

multiple areas beyond its original focus on the political economy of advanced countries: the analysis of several policy fields (housing, monetary, fiscal, industrial, and green policy) (e.g. Haffert and Mertens 2021; Van Doorslaer and Vermeiren 2021; Reisenbichler 2022; Anzolin and Benassi 2024; Driscoll and Blyth 2025); the application of the GM approach to peripheral countries and the Global South (e.g. Avlijaš 2020; Ban and Volintiru 2021; Wood and Schnyder 2021; Bürgisser and Di Carlo 2022; Nölke et al. 2022; Bondy and Maggor 2024; Kalanta 2024; Apaydin 2025; Bulfone et al. 2025); and the establishment of novel links between CPE and post-Keynesian economics (Palley 2022; Stockhammer 2022; Morlin et al. 2024). Yet the GM approach has concentrated its analyses on the national level and has been criticized for neglecting subnational differences in growth processes and outcomes (most forcefully by Regan and Blyth (2025); see, however, Di Carlo et al. (2024a) for an exception to the national focus). We address this gap in GM research by applying the GM framework to the subnational—that is, regional—level, not least by employing recent methodological advances developed in GM research.

To examine the subnational dimension of growth models and their regional interconnectedness, we draw in this article on theoretical and empirical insights from Italy, a country marked by persistent regional economic and social imbalances (Triglia and Burroni 2009; Viesti 2009; Felice 2014; Guarascio et al. 2025). Using EUREGIO input-output tables (IOTs) between 2000 and 2007, we assess the empirical validity of two alternative (but not necessarily mutually exclusive) theories of economic interdependence and uneven development between Northern and Southern Italy. The first, a *dependency* perspective, is rooted in Antonio Gramsci's writings and informed by World-Systems Theory (Wallerstein 1979) and Dependency Theory (Dos Santos 1970) in international political economy (IPE). It emphasizes asymmetric interregional trade, whereby the South is locked into an unequal exchange with the North: it exports primarily low value-added (VA) goods and services that are incorporated into higher VA products and re-exported back to the South. The second, a *subsidization* thesis—whose academic foundations were developed most notably by political economist Augusto Graziani (1997) but which was later radicalized and politically exploited by the Northern League in the 1980s and 1990s—interprets the South's underdevelopment as the result of structural dependence on public expenditures, financed through taxes raised in the North. While both perspectives are well established in the literature, their empirical validity has never been formally tested using regional IOTs. Yet IOTs are indispensable for tracing the size, composition, and direction of interregional economic flows (Damiani and Del Monte 1990). To our knowledge, no study to date has used regional IOTs for this purpose.

Our findings underscore the importance of distinguishing between long-term structural patterns—captured by a static analysis of regional GDP levels—and more recent dynamics emerging from the analysis of GDP growth patterns. The static analysis of in-level GDP data for 2000–2007 supports the subsidization perspective. It finds Southern stagnation to be associated with a heavy reliance on public sector spending and related non-market services, whereas Northern regions are characterized by robust manufacturing exports. This aligns with the view that government expenditures constitute a key pillar of the Southern economy, while high VA sectors remain concentrated in the North. The findings also reflect the historical centrality of the public sector in Southern Italy's economy and society (Triglia 2011; Di Carlo et al. 2024a), a legacy shaped by chronic underdevelopment and decades of developmentalist 'extraordinary interventions' (*interventi straordinari*) by the central state (Felice and Lepore 2017).

The dynamic analysis of GDP growth between 2000 and 2007 tells a different story, however. In these years, the Southern regions became increasingly reliant on exports to the North—predominantly intermediate goods and services and low VA final goods and services—while remaining weakly integrated into foreign markets. Relatedly, low-cost regional imports from the South were critical inputs

for Northern production systems, sustaining their competitiveness. The North imported intermediate goods and services from the South to produce and export higher VA final goods and services to both foreign and Southern markets. Domestically, the South's meagre growth was driven by low VA sectors such as low-end services, construction, and commodities and energy, whereas the North relied on higher VA manufacturing and advanced services.

In brief, in the first few years after the introduction of the euro, and before the onset of the financial crisis, the Southern Italy's economy underwent a shift consistent with the dependency perspective: as privatization, the dismantling of the 'extraordinary intervention', fiscal consolidation under European Monetary Union (EMU) rules, and the eastward reorientation of EU cohesion policy eroded the fiscal underpinnings of the subsidized model, the *Mezzogiorno* (Southern Italy) became increasingly dependent on exporting low VA goods and services to the North. This transition marked a move from redistribution-based growth to a weak and dependent regional export-led growth model, akin to those found in Eastern Europe (Ban and Adascalitei 2022), setting in motion a process of *competitive impoverishment* that foreshadowed the broader *forced structural convergence* (Scharpf 2021) towards export-led growth observed across Southern Europe in the Eurozone's post-crisis decade (Perez and Matsaganis 2019; Hein et al. 2021; Bürgisser and Di Carlo 2022).

Our contribution to the GM literature is thus threefold. First, we show that the GM perspective has no ontological commitment to national-level analyses and can be applied to the subnational level if appropriate for the research question and if suitable data, such as regional IOTs, are available. As with national growth models, regional growth models can be broken down into demand components and key sectors and linked to economic policy. Second, we demonstrate that interpretations of national economic aggregates, particularly the role of consumption and exports in growth models, are contingent on the chosen geographical aggregation. Our findings indicate that the more the geographical focus narrows, the less significant 'domestic' demand becomes relative to 'foreign' demand. It is therefore essential to ground aggregation choices in substantive interests and explicit theoretical assumptions about which economic flows are 'internal' and which are 'external'. Third, and specific to Italy's political economy, we provide the first analysis of regional interconnectedness based on regional IOTs that moves beyond static descriptions of growth models (e.g. Di Carlo et al. 2024a) to consider both GDP structure and its evolution in relation to other regions and the rest of the world.

A clarification is in order before proceeding. Throughout the article, we use the terms subnational and regional interchangeably to refer to the territorial unit of analysis defined by Eurostat as NUTS1 (nomenclature of territorial units for statistics) regions. Unlike in international economics, where "regional trade" often denotes exchanges within macro-areas (e.g. the European Union, Southeast Asia), here it refers exclusively to trade between subnational territorial units within Italy. By contrast, international trade refers to Italian regions' trade with the rest of the world.

The remainder of the article is structured as follows. Section 2 reviews the GM literature and its limitations in addressing the subnational dimension of growth. Section 3 outlines the two analytical perspectives on regional interconnectedness in Italy, from which we derive testable hypotheses. Section 4 presents the data and methodology, followed by the empirical results in Section 5. The final section concludes by discussing the peculiarities of the Italian case and drawing out the implications for CPE research more broadly.

2. Growth models research: The missing focus on subnational growth models

Over the past decade, the study of 'growth models' (Baccaro and Pontusson 2016) has gained significant traction within CPE, IPE, and post-Keynesian economics (Palley 2022; Stockhammer 2022;

Morlin et al. 2024). Moving beyond the supply-side emphasis of the earlier VoC literature (Hall and Soskice 2001), the GM perspective studies capitalist diversity across space and time by focusing on the demand drivers of growth (Baccaro et al. 2022). The GM approach has prompted a wide-ranging research agenda, which can be condensed into three main streams.

First, scholars have classified and empirically analyzed GMs according to their prevailing demand components of growth (Baccaro and Pontusson 2016; Cardenas and Arribas 2021; Hein et al. 2021; Baccaro and Hadziabdic 2024). Building on this research, CPE scholars have further sought to connect the study of the demand side of the economy with supply-side welfare and social institutions, thereby distinguishing countries according to different growth regimes (Hassel and Palier 2021; Hein et al. 2021). Their work maps cross-national variation across advanced economies (Johnston and Regan 2018; Behringer and van Treeck 2022), the Global South and emerging markets (Avlijaš 2020; Ban and Volintiru 2021; Schedelik et al. 2021; Wood and Schnyder 2021; Nölke et al. 2022; Bondy and Maggor 2024; Kalanta 2024; Apaydin 2025), and changes in growth trajectories over time (Höpner 2019; Erixon and Pontusson 2022). Within these classifications, the distinction between export-led and domestic demand-led economies emerges as crucial (Baccaro and Hadziabdic 2024). The former growth models rely primarily on exports to the rest of the world for growth, while the latter focus on domestic demand, particularly consumption, as well as government spending and investment.

Second, the analysis of demand components has been complemented by a focus on the key economic sectors driving economic growth (Baccaro and Pontusson 2016; Hassel and Palier 2021; Baccaro et al. 2022). Sectors such as manufacturing (Baccaro and Benassi 2017), finance (Braun and Deeg 2020), construction (Kohl and Spielau 2022), high-end services (Hassel and Palier 2021), the public sector (Di Carlo et al. 2024b), and tourism (Bürgisser and Di Carlo 2022) have been described as growth engines within different growth models, generating both wealth and employment (Hassel and Palier 2021; Herrero and Cardenas 2025).

Third, GM research has increasingly turned to the analysis of the politics of growth, examining the political foundations of the (macro-)economic policies that underpin distinct growth models (Baccaro and Pontusson 2022). Within this line of enquiry, scholars identify different political determinants, ranging from public opinion and voter preferences (Hübscher et al. 2023; Neimanns and Baccaro 2025) to the economic interests advanced by cross-class coalitions of key sectoral producer groups (Haffert and Mertens 2021; Di Carlo et al. 2025) and the role of political parties (Hopkin and Voss 2022).

While this body of research has substantially advanced our understanding of capitalist diversity, GM scholarship has thus far remained largely confined to the national level, and has consequently been criticized for its methodological nationalism—echoing similar critiques directed at the VoC literature in the late 2000s (Crouch et al. 2009; Trigilia and Burroni 2009). In contrast to established scholarship in regional economics (e.g. Petrakos et al. 2005; Boschma and Iammarino 2009; Crescenzi and Rodríguez-Pose 2011; Grillitsch et al. 2021; Fanti et al. 2023; Capello et al. 2024), which systematically examines local growth dynamics and developmental trajectories (for a comprehensive, 40-year overview of regional growth models in the field of regional economics, see Harris (2011)), CPE has devoted limited attention to the *spatial* dimension of growth within national economies. GM research has only recently begun to incorporate regional (Di Carlo et al. 2024a) and local or metropolitan dimensions of growth (Fraccaroli et al. 2023). Regan and Blyth (2025) have urged GM research to focus on *where* growth is generated and concentrated within advanced capitalist economies, namely in cities and regions.

Yet, so far progress in this direction has been limited. Existing CPE work on the regional dimension of growth models is either primarily theoretical (Regan and Blyth 2025) or is confined to static,

descriptive analyses of regional or metropolitan growth models (Fraccaroli et al. 2023; Di Carlo et al. 2024a). This article seeks to overcome both limitations. We offer, to our knowledge, the first input-output analysis of regional growth models, covering both their structure and recent evolution. Furthermore, we demonstrate that the classification of growth models by key demand component and sector and their links to economic policy, which lie at the core of the GM perspective, can be applied directly to the subnational level of analysis.

3. Two analytical perspectives on regional economic interconnectedness: Insights from the Italian case

For any examination of regional economies and territorial inequality, Italy offers a *pathway case study*—a crucial case used to clarify broader hypotheses (Gerring 2007: 238)—on which to develop theory-grounded expectations of regional interconnectedness with wider implications for political economy debates. This is so for two main reasons. First, Italy exhibits ‘the widest geographical dualism of all the European Union states’ (Davis 2015: 53), with pronounced territorial disparities. These asymmetries make it difficult to assign Italy to a single, coherent national growth model, instead positioning it as a textbook case of *regionalized capitalism* (Trigilia and Burroni 2009) and a *composite economy* (Locke 1996), characterized by a high degree of internal diversity, both in terms of regional growth drivers and supply-side socioeconomic institutions (Di Carlo et al. 2024a). Second, because these disparities are both deep and persistent, Italy has long served as a natural laboratory for the study of intra-country inequality in the social sciences.

Regional economic disparities have preoccupied Italy’s politicians, scholars, and intellectuals since unification in 1861 (for authoritative reviews, see Barbagallo (2013) and Cassese (2016)). Since the XIX century, regional economic inequality in Italy has been largely framed in terms of the ‘Southern question’ (*questione meridionale*), a concept denoting the persistent backwardness of the Mezzogiorno relative to the North. Within this tradition, explanations for Southern underdevelopment fall into two broad camps (Felice 2014): those emphasizing *endogenous* causes—rooted in the characteristics of the Southern economy and society—and those focusing on the *interconnectedness* between Northern and Southern Italy’s distinct economic systems, integrated under the centralized polity created after unification.

Of the former, Banfield (1958) famously attributed Southern underdevelopment to the cultural norms of *amoral familism*. This culturalist perspective later evolved into analyses of deficient social capital as a factor undermining democratic institutions and economic development (Putnam 1993). Related contributions have emphasized the persistence of patronage within clientelist political systems (Trigilia 2011) and the absence of key ‘preconditions for industrial development’, such as proximity to European markets, adequate physical infrastructure, high literacy and skill levels, and access to critical primary resources (Iuzzolino et al. 2013).

Among the latter, scholars have interpreted Southern Italy’s underdevelopment through its structural relationship with the North within the Italian political economy. From this literature, two main, partly alternative and partly complementary, perspectives have emerged. For the sake of simplicity, we call them the *dependency perspective* and the *subsidization perspective*.

The dependency perspective draws on arguments from World-Systems Theory (Wallerstein 1979) and Dependency Theory (Dos Santos 1970) in International Political Economy. Rooted in Marxist thought, the approach focuses on the hierarchical interaction between more and less developed economies. In the global economy, underdeveloped countries occupy a subordinate position in the international division of labor, specializing in low VA, labor-intensive intermediate goods and services. These are incorporated into more complex production systems in advanced economies, which re-export

higher VA goods back to the periphery, locking it into a state of underdevelopment through unfavorable terms of trade (low export prices versus high import prices (Sonntag 2001)). While initially formulated to explain relationships between sovereign states, the dependency logic has also been applied to intra-national dynamics—for example in the United Kingdom, where England (the core) has been described as exercising ‘internal colonialism’ over its Celtic periphery (Wales, Scotland, and Ireland (Hechter 1975)).

In Italy, the first and most influential proponent of the dependency perspective was Antonio Gramsci, who described the Mezzogiorno as ‘exploitation colonies’ (*colonie di sfruttamento*) to capture its subaltern position vis-à-vis the economic interests of Northern industrial elites (Barbagallo 1988). Although this interpretation has not gone uncontested—see, in a large literature, Cafagna (1989) and Felice (2014)—it remains highly influential. In this view, Southern underdevelopment stems from the region’s dependent integration into the Northern economy. The South operates as a satellite to Northern industry, exporting raw materials and intermediate goods, as well as cheap labor, that serve as inputs for more complex manufacturing processes. Northern producers then re-export higher VA final goods both to Southern consumers and to international markets.

A complementary account of regional interconnectedness—the subsidization perspective—gained prominence in the 1970s/80s. Rather than focusing on hierarchical trade dependence, this perspective emphasizes the role of fiscal transfers from the Italian central government in sustaining the Mezzogiorno’s economy. Since the post-World War II period, these transfers have taken multiple forms: public sector employment and wage-setting (Alesina et al. 1999; Santoro 2014; Di Carlo 2023), compensatory social policy programmes (Di Carlo et al. 2024a), and direct public investment in infrastructure and industrial development, particularly under the extraordinary intervention of the post-war decades (Felice and Lepore 2017). By creating or supporting jobs—especially in the public sector—these transfers bolstered household incomes in the South. In turn, higher consumption levels generated spillover demand for goods produced in the North, increasing Southern imports of Northern industrial output.

Within this debate, political economist Augusto Graziani highlighted a shift in the *quality* of public spending for the South during the 1970s: away from productive investment and towards sustaining Southern household consumption—primarily through public wages, pensions, and similar transfers—to purchase goods produced in Northern Italy. This flow of public funds, often channeled through clientelist networks, constituted what Graziani saw as the key power resource of the ‘Southern social bloc’ (*blocco sociale del sud*), dominated by actors whose economic interests were tied to maintaining such transfers (Graziani 1997; Trigilia 2011). Thus, using bi-regional macroeconomic models, scholars have analyzed North-South interdependencies and demonstrated that the bulk of fiscal spending for the South fueled imports of Northern final goods, thereby supporting the Northern productive system through economies of scale within the Italian internal market. In fact, and paradoxically, both consumption and unemployment increased in the South (Barbagallo 2013: 178).

Since the 1990s, with the rise of the secessionist Northern League under Umberto Bossi, Southern Italy’s chronic reliance on fiscal transfers became highly politicized, leading to the emergence of a ‘Northern question’ (*questione settentrionale* (Berta 2008)). The term has been popularized in Northern League’s circles to sustain claims for greater fiscal (and political) independence of Italy’s Northern regions to end the subsidization of the allegedly parasitic Southern regions.

The dependency and subsidization theses can be regarded as complementary, but with some important differences (see Table 1 for an overview). Both view regional interconnectedness as central to explaining Italy’s intra-national patterns of uneven development, yet they differ in their primary *focus*

Table 1. Main characteristics of the two complementary theoretical approaches to regional interconnectedness.

	Dependency hypothesis	Subsidization hypothesis
Main focus	Interregional <i>trade</i> interconnectedness	Interregional <i>fiscal</i> (and trade) interconnectedness
Power and dependency structures	Asymmetric North-South trade relations: North exploits South as <i>colonia di sfruttamento</i>	South dependent on central government expenditures: <i>Mezzogiorno sussidiato</i> free-riding on central government public finances
Interregional trade and fiscal patterns	South-to-North export of commodities and low VA intermediate goods and services; North-to-South export of high VA final goods and services	Central government fiscal transfers enhance Southern capacity to import Northern final goods and services
Logics and mechanisms of underdevelopment	Trade-dependency trap	Regional development trap for lack of endogenous growth capacities

on trade vs. fiscal interdependence; the power and *dependency structures* they emphasize; the characteristics in terms of *interregional trade and fiscal patterns* they highlight; and the underlying *mechanisms* through which such interconnectedness sustains development in the North and underdevelopment in the South.

First, the dependency perspective depicts a scenario in which Northern regions exercise structural economic power over Southern regions through trade dynamics, locking the latter in an underdevelopment trap. In this view, the South functions as a subordinate supplier of intermediate goods to the North, while depending on the North for imports of higher VA final goods. By contrast, the subsidization perspective situates Southern subordination primarily in relation to the Italian state, on whose public finances it depends for consumption-enhancing fiscal transfers. In its politicized form—prominently advanced by the Northern League in the 1990s and 2000s—this narrative portrays the ‘subsidized South’ (*Mezzogiorno sussidiato*) as exploiting the North by free-riding on national resources. According to this framing, the South receives more in fiscal transfers from the common public pool than it contributes, while the North—due to its stronger productive base—bears a disproportionate share of the fiscal burden. This view largely ignores, however, that these transfers also sustain Southern demand for Northern goods, indirectly benefiting Northern industry.

Second, the dependency perspective centers on trade patterns between the two blocs. The South exports low VA goods and services to the North, which are absorbed into the North’s more sophisticated production system as cheaper inputs. By contrast, the subsidization perspective highlights the role of government expenditure in shaping internal trade flows. Fiscal transfers from the central state boost the consumption capacity of Southern households, particularly the middle classes, who then import final goods from Northern producers. Northern industry thus benefits indirectly from a subsidized stream of Southern imports, a large internal market, and the resulting economies of scale.

Third, the two perspectives diverge in the mechanisms they identify for Northern development and Southern underdevelopment. From the dependency perspective, peripheral areas—Southern Italy in this case—remain underdeveloped because of their structurally subordinate position in regionally organized production systems, specializing in low VA goods and services. This creates a trade-dependency trap in which Northern regions, occupying a hierarchically superior position in the value

chain, can use the South as an ‘exploitation colony’ (*colonia di sfruttamento*, in Gramsci’s terms) to secure cheaper inputs for their higher-end production systems. The subsidization perspective, by contrast, emphasizes that the institutionalized flow of public resources to the South inhibits the development of local, endogenous growth capacities and fuels corruption (Triglia 1994), while Northern Italy stands to benefit only indirectly from this arrangement, as the subsidization of Southern household consumption sustains demand for goods produced in the North.

3.1 Empirical hypotheses from the two approaches on regional interconnectedness

Based on the theoretical elements described above, we derive a set of hypotheses related to 1) the key final demand components for regional growth and 2) the key sectors in Southern and Northern regions. We briefly introduce the theoretical rationale for each hypothesis, the hypothesis itself, and the empirical indicators used to test it.

The dependency perspective (D) paints a picture of the South as subordinate to the North in terms of trade relations. According to Gramsci’s view of the South as an ‘exploitation colony’ for the North, the South contributes to the production process of Northern firms in a subordinate position and its access to international markets is limited and mediated by Northern firms. This has two implications: First, the South’s exports are primarily composed of low VA intermediate goods and services rather than final products; and, second, they are primarily directed to Northern Italian regions rather than to foreign markets.

D1: Key final demand components:

D1a: While Southern regions primarily export intermediate goods and services to the North, the North mainly exports final goods and services to the South.

Empirical test: In the South, regional exports of intermediate goods and services account for a larger share of GDP and GDP growth, whereas final goods and services account for a larger share of GDP and GDP growth in the North.

D1b: Compared to the North, exports from the South to the rest of the world are lower for both intermediate and final goods and services.

Empirical test: The share of GDP and GDP growth accounted for by foreign exports of both intermediate and final goods and services is smaller for the South than for the North.

D2: Key sectors: In the South, low VA sectors predominate, while high VA sectors predominate in the North.

Empirical test: The share of GDP and GDP growth accounted for by low VA sectors (e.g. low-end services, non-market services, construction, commodities, energy) is larger in the South, whereas high VA sectors (e.g. manufacturing, high-end services) have higher shares in the North.

From the subsidization perspective (S), we derive three hypotheses. Hypotheses S1 and S2 focus primarily on the final outcome of the subsidization perspective, namely that if subsidization is taking place, the Southern economy must rely heavily on government spending and the public sector. By contrast, other regions rely on higher VA sectors, such as manufacturing, to fuel regional and international exports.

S1: Key final demand components: For Southern regions, the key demand component is government expenditures.

Empirical test: The contribution of government spending in the South to GDP and GDP growth is larger than that of any other final demand component.

S2: Key sectors: The public sector is the key economic sector in the South, while (export) manufacturing is the key sector in the North.

Empirical test: The key sector contributing to GDP and GDP growth in the South is non-market services, whereas manufacturing is the key sector in the North.

The subsidization perspective implies that the public sector in the South is financed through fiscal transfers from the central government. Although the IOTs only provide information on exchanges of goods and services, in hypothesis S3 we assume that regional exports from the Center, where the central government is located, allocated to government spending in the South track fiscal transfers.

S3: Regional trade from the Center towards the South is characterized by the flow of more public goods and services than towards other regions.

Empirical test: Final regional exports allocated to government spending from the Center towards other regions are highest towards the South.

4. Data and methodology

4.1 Data: The EUREGIO input-output dataset

We use interregional input-output tables from EUREGIO, one of the few existing datasets with IOTs detailing interregional flows, to empirically test our hypotheses about subnational growth models' interconnectedness. The EUREGIO input-output database provides global IOTs between regions of several European countries and these regions' economic exchanges with countries outside the European Union and with the rest of the world (Thissen et al. 2018). Data are available on an annual basis between 2000 and 2010 and allow regional analysis at the NUTS1 regional level. We excluded 2008, 2009, and 2010 because the near-zero or negative GDP growth observed in some regions after the 2008 Global Financial Crisis, particularly in the South, creates excessive instability in the relative contributions to GDP growth of the final demand components and sectors we examine. This temporal exclusion focuses the analysis on the prefinancial crisis period.

Economic geographers have already used EUREGIO data to analyze regional economic systems in terms of their participation in and positioning within global value chains. For instance, Bolea et al. (2022) examine the spatial determinants of EU regions' positions and shares in global value chains, while Capello and Dellisanti (2024) show that different forms of regional specialization and participation in global value chains have differentiated effects on regional value-added growth.

At the same time, although analyses of Italy's regional inequalities based on structural macroeconomic modeling abound—most notably the various models developed by SVIMEZ (for a detailed review, see Damiani and Del Monte (1990))—to our knowledge, no previous studies have adopted an input-output perspective to trace and quantify the interconnectedness of regional growth models. Compared to standard bi-regional macroeconomic models, our IOT approach offers several advantages: it enables a decomposition of regional economic exchanges in terms of demand components and sectors; it captures interregional trade and VA linkages between sectors; and it provides a transparent accounting framework to test alternative political economy hypotheses—such as subsidization versus dependency—that cannot be captured by macroeconomic simulation alone.

Using EUREGIO data, we decompose the GDP of Italian regions based on final demand components (consumption, government spending, investment, and exports and imports between the regions and the rest of the world) and contributions of economic sectors to GDP. We aggregate the original data both geographically and by economic sector. Geographically, we are mainly interested in flows between five macro-regions (North-Eastern Italy, North-Western Italy, Central Italy, Southern Italy,

and rest of the world). We rely on the NUTS1 regional level and, for the scope of our analysis, construct four regional blocs as follows:

- North-West (NW): Piedmont, Valle d'Aosta, Liguria, Lombardy
- North-East (NE): Bolzano, Trento, Veneto, Friuli-Venezia Giulia, Emilia Romagna
- Center (CE): Tuscany, Umbria, Marche, Lazio
- South (SO): Abruzzo, Molise, Campania, Apulia, Basilicata, Calabria, Sicily, Sardinia

Regarding the last regional bloc, the South, we combine the two original NUTS1 regions, 'South' and 'Islands', into a single region for two reasons, which we discuss in the next paragraph: economic homogeneity and a population size similar to that of other regions. The fifth geographical aggregate we consider, the rest of the world, is defined as an aggregation of all the remaining regional and national units available in the original dataset.

There are two reasons for constructing the above regional blocs. First, they comprise regions that, according to our theoretical framework, are expected to exhibit economic homogeneity with respect to the two perspectives we wish to examine. Second, these regions have a similar demographic size. As the analyses below demonstrate when comparing the regional blocs with Italy as a whole, regional growth models are only comparable if the regional units of interest are of a similar size. In particular, the significance of the main economic aggregates (especially local consumption versus regional exports) hinges on the size of the geographical units.

Regarding sectors, to facilitate the interpretation and reduce the complexity of our empirical findings, we aggregate the initially available fourteen sectors into six sectors as follows:

- (1) Manufacturing: Food, beverages, and, tobacco; Textiles and leather, etc; Coke, refined petroleum, nuclear fuel, and chemicals, etc; Electrical and optical equipment and transport equipment; Other manufacturing
- (2) Low-end services: Distribution; Hotels and restaurants; Transport, storage, and communications
- (3) High-end services: Financial intermediation
- (4) Non-market services: Non-market services
- (5) Construction: Construction; Real estate, renting, and business activities
- (6) Commodities & energy: Agriculture; Mining, quarrying, and energy supply

Regarding the manufacturing sector, ideally, we would like to distinguish between low- and high-tech manufacturing. However, the five original manufacturing sectors available are too broad and tend to mix low and high VA industrial production, as identified in existing classifications (OECD 2011; Eurostat 2023). Furthermore, as shown in [Appendix B](#), where the analyses are disaggregated by the original sectors, the modal manufacturing sector in all regions is 'Other manufacturing', which comprises a variety of industrial activities. Despite this limitation, we will assume when interpreting the empirical findings presented below that, on average, manufacturing comprises activities associated with higher VA than other sectors. This assumption is consistent with global data on the VA by different economic activities (OECD 2025).

The analyses we present in the article are disaggregated for the fourteen original sectors in [Appendix B](#).

4.2 Methodology: Import-adjusted contributions to GDP

Our approach to calculate the contributions to GDP of final demand components and of sectors (specifically, contribution of sectors to final demand) draws on [Baccaro and Hadziabdic \(2024\)](#), who in turn have adapted the approach of [Bussière et al. \(2013\)](#).

The classical and most frequently used expenditure approach to derive GDP is based on a decomposition into components of final demand, expressed as the sum of consumption, investment, government spending, and net exports (difference between exports and imports):

$$GDP = C + I + G + (X - M) \quad (1)$$

A problem of this approach is that all imports are subtracted from exports without considering that some imports satisfy final demand directly (e.g. some imports are directly consumed) or indirectly (by being incorporated as intermediate inputs into domestically produced goods and services that satisfy final demand). As a result, the growth contribution of exports is (often considerably) underestimated and the contributions of the other three components (especially consumption) overestimated.

Using input-output tables, we can derive the import-adjusted demand contributions of each component of final demand by subtracting from each the total (direct and indirect) imports associated with it, following the procedure described in [Baccaro and Hadziabdic \(2024\)](#). While import adjustment has proven to be highly relevant when countries are the units of analysis ([Baccaro and Hadziabdic 2024](#)), it is even more important at the subnational level: the lower the level of aggregation, the less important the components associated with ‘local’ demand (consumption, government spending, investment) become, while exports become more important because they involve exchanges between smaller geographical areas. As we show below, the role of regional exports—that is, trade among Italian regions—is even more important than that of exports to the rest of the world. However, the importance of regional trade would be much less visible if imports were not allocated to the component of demand with which they are associated. Since our main goal is to examine the interdependence between regions, the adjustment for imports is essential in this article.

Ultimately, we reformulate the expenditure formula of GDP by subtracting from each demand component the volume of imports (M) associated with each demand component:

$$GDP = (C - M_C) + (I - M_I) + (G - M_G) + (X - M_X) \quad (2)$$

Hence, $(C - M_C)$ represents the import-adjusted contribution to GDP of consumption, $(I - M_I)$ the import-adjusted contribution to GDP of investment, $(G - M_G)$ the import-adjusted contribution to GDP of government spending, and $(X - M_X)$ the import-adjusted contribution to GDP of exports.

Since we focus on regional flows, we distinguish between interregional imports and exports within Italy and exports from the regions to the rest of the world. Therefore, when focusing on the GDP of a specific region (we take the North-East (NE) as an example), we split the term for exports $(X - M_X)$ in [equation \(2\)](#) into eight terms:

$$\begin{aligned} GDP_{NE} = & (C_{NE} - M_{C\ NE}) + (I_{NE} - M_{I\ NE}) + (G_{NE} - M_{G\ NE}) \\ & + (X_{int\ reg\ NE\ NW} - M_{X\ int\ reg\ NE\ NW}) + (X_{int\ reg\ NE\ CE} - M_{X\ int\ reg\ NE\ CE}) \\ & + (X_{int\ reg\ NE\ SO} - M_{X\ int\ reg\ NE\ SO}) + (X_{int\ NE\ rest} - M_{X\ int\ NE\ rest}) \\ & + (X_{fin\ reg\ NE\ NW} - M_{X\ fin\ reg\ NE\ NW}) + (X_{fin\ reg\ NE\ CE} - M_{X\ fin\ reg\ NE\ CE}) \\ & + (X_{fin\ reg\ NE\ SO} - M_{X\ fin\ reg\ NE\ SO}) + (X_{fin\ NE\ rest} - M_{X\ fin\ NE\ rest}) \end{aligned} \quad (3)$$

where the first sub-term $(X_{int\ reg\ NE\ NW} - M_{X\ int\ reg\ NE\ NW})$ represents import-adjusted regional exports of intermediate goods and services from the North-East to the North-West, and similarly for

the other regions including the rest of the world, and the fifth sub-term ($X_{fin\ reg\ NE\ NW} - M_{X\ fin\ reg\ NE\ NW}$) represents import-adjusted regional exports of final goods and services from the North-East to the North-West, and similarly for the other regions.

The same approach can be used to calculate the contributions to final demand of the six macro-sectors (Baccaro and Hadziabdic 2024). From the final demand satisfied by each sector, we subtract the value of imports directly and indirectly absorbed by the sector in question:

$$GDP = (\text{Man} - M_{\text{Man}}) + (\text{Low} - M_{\text{Low}}) + (\text{High} - M_{\text{High}}) + (\text{Non} - \text{market} - M_{\text{Non-market}}) + (\text{Constr} - M_{\text{Constr}}) + (\text{Comm} - M_{\text{Comm}}) \quad (4)$$

For the analysis, we calculate the contributions to GDP and GDP growth of the seven components of final demand:

- consumption, government spending, investment, regional exports of intermediate goods and services, exports of intermediate goods and services to the rest of the world, regional exports of final goods and services, exports of final goods and services to the rest of the world;

and of the six macro-sectors analyzed:

- manufacturing, low-end services, high-end services, non-market services, construction, commodities & energy.

We provide analyses in terms of both GDP and GDP growth. A focus on the decomposition of GDP across demand components and sectors allows us to analyze the long-term features of regional economic activity, while a focus on GDP growth puts the emphasis on more recent dynamic changes. All our hypotheses are general in character, hence independent of whether the empirical analyses focus on GDP or GDP growth. In the following, we show that the static and dynamic perspectives do not lead to the same conclusions and allow us to better understand the links between regions. We limit our analysis to the period 2000–2007, as GDP growth in the two years following the financial crisis is so volatile that it is impossible to derive reliable estimates.

The formula for the GDP growth contribution of a final demand component or of a sector P between time $t-1$ and time t is as follows:

$$\text{Growth contribution of } P = \frac{P_t - P_{t-1}}{P_{t-1}} \frac{P_{t-1}}{GDP_{t-1}} = \frac{\Delta P}{GDP_{t-1}} \quad (5)$$

GDP growth is therefore defined as the percentage change in GDP contributions between two years. By averaging the yearly growth rates between 2000 and 2007, we can examine the average change over this period and compare the resulting dynamic perspective with the more static, structural view based on the average contributions to GDP over the same period.

5. Results: Growth contributions of final demand components and sectors

To empirically test the hypotheses formulated in Subsection 3.1, we use two empirical indicators: 1) the breakdown of GDP and GDP growth by components of final demand (Fig. 1, Table A1) and 2) the breakdown of GDP and GDP growth by the six economic sectors (Fig. 2, Table A2). While the

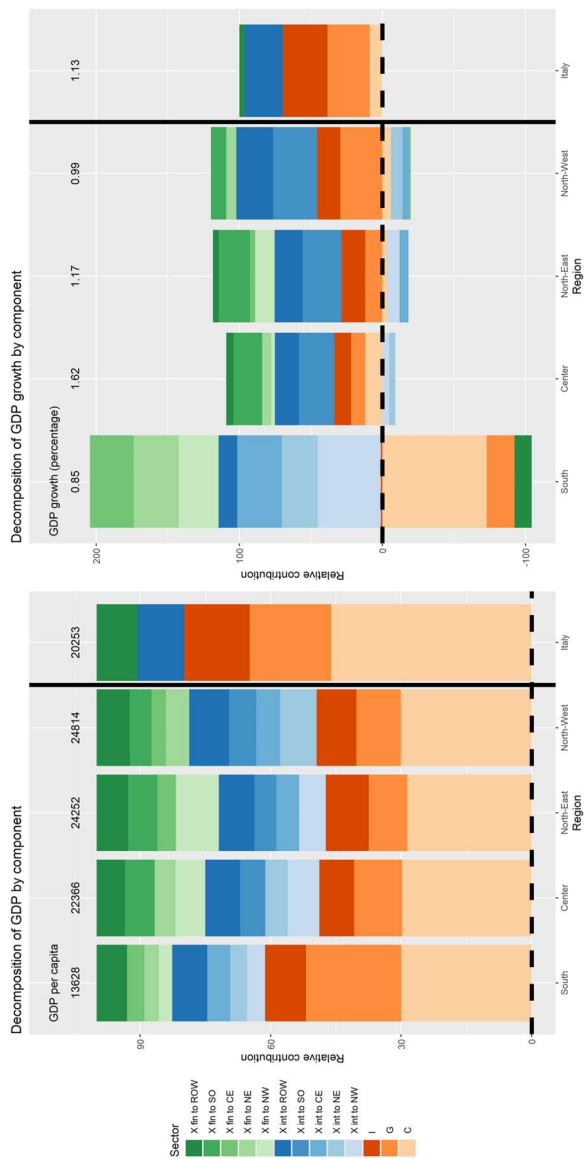


Figure 1. Average annual relative contributions to GDP and GDP growth of final demand components between 2000 and 2007.

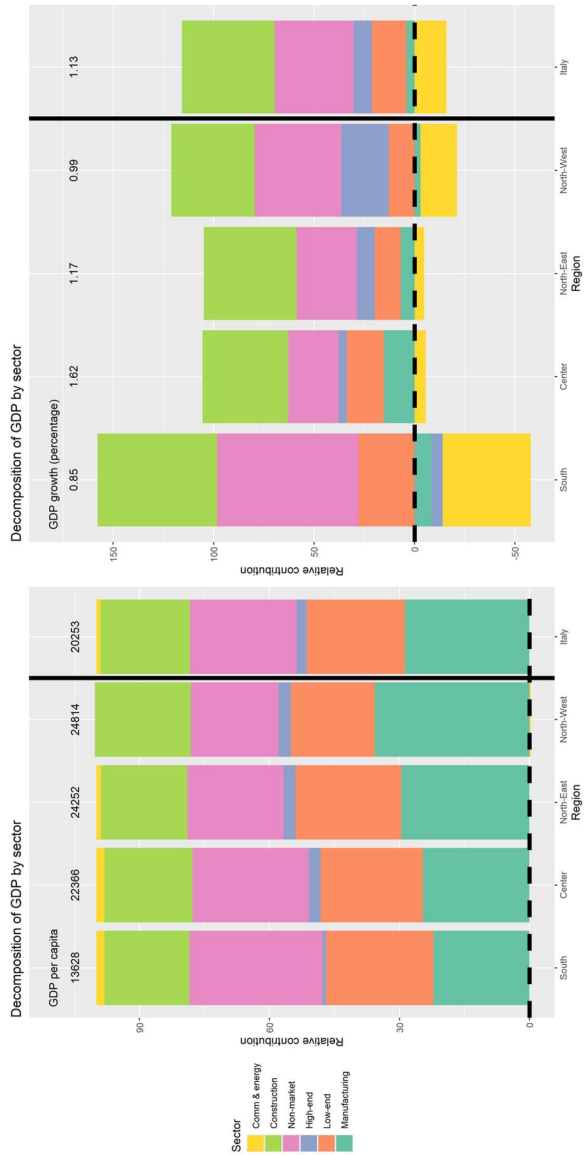


Figure 2. Average annual relative contributions to GDP and GDP growth of sectors between 2000 and 2007.

exact numeric values are listed in [Tables A1-2](#), [Appendix A](#), in the article we focus on graphical representations.

We begin by comparing the growth model of Italy as a whole with that of its regions and examining the differences in economic development between regions. [Figure 1](#) is a barplot of the relative contributions to GDP and GDP growth of final demand components in Italy and across the four regions of interest. The graph on the left shows that the role of domestic demand, particularly local consumption (29%–30%), is almost the same in all four regions, contrasting with a much higher percentage for Italy as a whole (46%). This is because the definition of ‘local consumption’ [‘consumption’ is the share of final demand satisfied by consumption expenditures on local (i.e. regional) products and services] depends on the size of the geographical unit of interest. The smaller the geographical unit, the less important domestic components are. This is because when the analysis switches from the national to the regional level, part of the national domestic consumption becomes part of interregional imports of goods and services from other national regions. Conversely, and for the same reasons, regional GDP appears to be more strongly linked to exports than the Italian economy as a whole, which is due to an expansion in the types of goods and services categorized as exports. While Italy’s exports comprise only international trade, regional exports include both international trade and the exchange of goods and services with other regions. Hence, regional growth models are only comparable if the regions are of a similar size. We ensured that this was the case by focusing on regions with a similar population size. As additional evidence to support this point, [Appendix C](#) presents the same analyses as the article but with the economically similar North-West and North-East regions combined. Local consumption in this combined Northern region increases to 37%, making domestic demand considerably more important than when the two regional blocs are considered separately.

The figures above the graph also show the differences in GDP per capita (in constant prices with the year 2000 as reference) between the regions and enable us to check the reliability of our data. Only these figures focus on GDP per capita; the rest of the graph shows GDP decomposition into final demand components. While the other regions do not deviate more than 10%–20% from Italy’s average GDP per capita (EUR 20,253), the Southern regions have a significantly lower GDP per capita (EUR 13,628). The data hence validate the existence of substantial differences in economic development between the South and the rest of Italy. Furthermore, although the South is the region with the lowest baseline GDP, it is also the region with the lowest GDP growth rate (0.85%) between 2000 and 2007, as the graph on the left shows, which indicates that the economic gap with the other regions is widening. The small, near-zero growth rate in the South also suggests that any further breakdown into components and sectors would produce more unstable contributions to GDP growth when measured as a share of GDP growth. This is indeed shown by the analyses in the following paragraphs.

Turning our attention to the hypotheses, we can test the first set relating to the dependency perspective (D1a, D1b) by examining [Fig. 1](#) in greater detail. Focusing on GDP levels (left-hand side) and looking at the bar representing the South, in particular the areas with shades of blue and green representing intermediate (X int to NW, X int to NE, X int to CE) and final exports (X fin to NW, X fin to NE, X fin to CE) to other regions, we can only partially confirm hypothesis D1a on the focus on intermediate (South) or final (North) exports between regions. On the one hand, flows of intermediate exports from the South to the other three regions (e.g. South to North-West: 4%) are in all three cases lower than the incoming flows from these three regions (e.g. North-West to South: 6%). The same is true for exports of final goods and services (e.g. South to North-East: 3% vs. North-East to South: 7%). We hence cannot confirm that exports of intermediate goods and services from the South to the North are more important than those in the opposite direction (inconsistent with D1a), while

we can confirm that final exports from Northern regions to the South are more important than those from the South to the North (consistent with hypothesis D1a). Consistent with hypothesis D1b, we find that regions outside the South indeed have a slightly more important contact with intermediate (e.g. South: 8% vs. North-West: 9%) and final demand (e.g. South: 7% vs. North-West: 8%) from the rest of the world in terms of GDP. However, total interregional exports are more important for all regions than exports with the rest of the world, for both intermediate and final goods and services.

If we focus on GDP growth (right-hand side), a different picture emerges. The clearly dominant growth driver of the Southern regions is exports to other Italian regions, especially exports of intermediate goods and services (e.g. South to North-West: 44%) (consistent with hypothesis D1a) but also of final goods and services (e.g. South to North-East: 32%) (partially inconsistent with hypothesis D1a). In other words, the Southern growth model of the pre-crisis 2000s is export-led, specifically exports to the North. Flows from other regions to the South are also important, but not as important as those from the South to them. Indeed, while several components of final demand make an important positive contribution to growth in other regions, the free fall of domestic demand components in the South (C: -73%; G: -19%) is only offset by regional exports. However, this export-led growth in the South is limited to interregional exports. If we focus on the growth of exports to the rest of the world, we observe a gap in favor of the Northern regions that is even more pronounced than through in-level data. For intermediate exports, for example, the share of foreign demand in the North-West (25%) is almost twice as high as in the South (13%). For final demand absorbed by the rest of the world, the South is the only region with a decline in these final exports (-12%), confirming the expectation (D1b) of an increasingly more pronounced contact of the Northern regions with foreign demand compared to the South.

Overall, we find mixed evidence for the first set of dependency theory hypotheses. On the one hand, we confirm that the dominant export destination, national or international, clearly shows a regional North-South divide. Exports from the North interact more strongly with (intermediate and final) foreign demand between 2000 and 2007, and the gap widens over the observation period. At the same time, we cannot confirm that there is a consistent difference in the importance of exports, whether intermediate or final exports, between regions. A static in-level analysis mainly shows the greater dependence of Northern regions on exports, whether intermediate or final, while neither regional nor international exports account for a large share of Southern GDP. In terms of GDP growth, however, the South relies almost exclusively on regional exports for growth between 2000 and 2007, and to a much greater extent than the North. This pattern is more pronounced for intermediate goods and services, but it also applies to final goods and services. Rather than a *qualitative* differentiation in terms of intermediate or final exports, the North-South divide underlines a *quantitative* differentiation in terms of the importance of exports, which were historically more important in the North but became the sole source of Southern growth in the 2000s.

For the hypotheses relating to the subsidization perspective, Figure 1 shows the clearly higher share of government spending (22%) in Southern Italian GDP, a percentage more than twice as high as in the other regions. Overall, we confirm that the economic structure of the Southern regions clearly depends more on government spending than in other regions (S1). However, a dynamic analysis focusing on GDP growth shows a clear erosion of this government spending-based model from the year 2000 (inconsistent with S1). Indeed, the growth contribution of local consumption is negative, and by a large margin, in the South (-73%), and the same is true to a lesser extent for government spending (-19%).

Figure 2, a barplot of the relative contributions to GDP and GDP growth of sectors in Italy and across the four regions of interest, allows us to test the second group of hypotheses derived from our

two guiding theoretical perspectives. First, we observe that low VA sectors, especially non-market services (31%), but also to a lesser extent low-end services (25%) and commodities & energy (2%), represent a higher share of regional GDP in the South than in the other regions. By contrast, the high VA manufacturing sector is significantly more important in other regions, particularly the North-West (36%), than in the South (22%). If we focus on GDP growth (right-hand side of Figure 2), confirmation is even stronger of the role of low VA sectors for growth in the South, associated with non-market services (70%), construction (60%), and low-end services (28%), while the other sectors experience negative growth. The pattern in the other regions is more heterogeneous, but it confirms their stronger focus on high VA sectors compared to the South. While the North-West shows a slight decline in manufacturing (−3%), it is the only region with sustained growth in high-end services (24%), while the Central regions show the strongest growth in manufacturing (15%). Overall, these analyses confirm the dependence on non-market services and/or low VA sectors in terms of both GDP share and GDP growth in the South, in contrast to a stronger role of higher VA sectors in the rest of Italy, especially manufacturing (consistent with D2, S2).

The positive contribution of non-market services to GDP growth in the South (70%) seems at odds with the negative contribution to government spending (−19%) we described above. This contradiction can be explained by the fact that non-market services and government spending at the regional level are not the same economic aggregate. Therefore, a decline in government spending is not inconsistent with growth in non-market services, since many non-market services belonging to this sector (especially healthcare, but also education) are increasingly privatized (Banchieri 2023). Degrowth in government spending and growth in non-market services in the South is consistent with growing privatization, particularly in healthcare. With an aging population, demand for these services is increasing constantly, hence the positive growth rate of non-market services. However, their provision is becoming increasingly privatized, hence the negative growth rate of government spending. This applies particularly to a region like the South, where GDP growth is almost zero. Even a small increase in private healthcare spending can result in a positive contribution to GDP growth, while even a small decrease in public healthcare spending can result in a negative contribution to GDP growth. While the composition of non-market services would deserve further investigation in order to understand which types of services are declining and which are stable, unfortunately the data from EUREGIO do not allow a further breakdown.

Finally, Table 2 looks more closely at regional exports allocated to government spending from the Center to the other regions. We express the importance of these flows in terms of their value per

Table 2. Regional exports allocated to government spending from the center to the other regions.

Regional exports	Absolute contribution per capita	Absolute contribution (millions)	Share	Share in final regional exports from the center
2000–2007 (in-level, GDP)				
Center -> North-West	358	3980	1.6%	23.68%
Center -> North-East	235	2608	1.05%	21.64%
Center -> South	752	8367	3.37%	49.01%
2000–2007 (growth, GDP growth)				
Center -> North-West	0%	0%	0%	0.02%
Center -> North-East	0%	0%	0%	0%
Center -> South	0%	0%	0.02%	0.11%

capita, their absolute value in euros, their share of GDP and GDP growth, and their proportion of all final regional exports (which could alternatively be associated with consumption or investment). If we examine these flows between 2000 and 2007, all indicators suggest a greater allocation of government spending from the Center to the South compared to other regions. For instance, the value of these flows per capita is 752 euros per year in the South but less than half that amount in the North-West (EUR 358) and the North-East (EUR 235). Of final goods and services transferred from the Center to the South, 49% are allocated to government spending rather than consumption or investment, whereas they account for no more than 22% in the other two regions. The lower part of the table shows that these types of exchanges between the Center and the other regions remained relatively stable, with virtually no growth or decline. Taken together, these findings confirm hypothesis S3 regarding public sector flows between the Center and the South, which remain stable over the observation period. However, the magnitude of these flows is fairly limited, accounting for less than 3.4% of GDP in the South and contributing almost nothing to GDP growth. While these results are in the expected direction, a definitive test of public financing of the South by the central government is not possible with the EUREGIO data as it would require an analysis of fiscal flows based on financial data rather than the exchange of goods and services.

6. Concluding remarks

In this article, we have accomplished two tasks. First, we have shown the usefulness of applying the growth model perspective to the subnational level. Our analysis demonstrates how this perspective can be effectively deployed to examine units of analysis other than national economies, provided the necessary data are available. By comparing Italy's growth model with those of its regions, we have also shown that the domestic versus export orientation of a geographical unit depends on its size. In the absence of trade barriers between regions, the classification of final sales depends on the unit of aggregation. Sales directed to economic actors (households, firms, and governments) outside the administrative unit are classified as exports. Conversely, sales to recipients classified as residents of the administrative unit are classified as domestic demand (consumption, investment, and government expenditures). Smaller geographical units are more likely to be export-led than larger ones. The smaller the geographical unit, the less important domestic components become; the opposite applies to export components. This is a crucial aspect to consider in future research. If the focus of future research will be on analyzing smaller units, such as cities, as has recently been suggested by [Regan and Blyth \(2025\)](#), it is important to be aware that these local growth models are likely to appear heavily export-led. Conversely, geographical units beyond the national level could be examined with a focus on economic areas such as the European Union. Such analyses are possible with IOTs by aggregating regions and/or countries into higher-level units. In this case, exports become less important than for individual countries, while domestic demand becomes more important. Researchers must be aware that the domestic or export orientation of a geographical unit is closely linked to its size. The level of aggregation chosen should therefore be based on clear theoretical arguments explaining which economic exchanges should be considered local and which external.

Second, we have employed the GM framework—together with methodological innovations such as input-output table analysis and import-adjusted GDP decomposition—to reassess two long-standing perspectives on Italy's regional imbalances. The dependency perspective, rooted in Gramsci's writings, holds that the South is locked into an asymmetric exchange with the North: it exports primarily low VA goods and services, which the North transforms into higher VA products and then re-exports, including back to the South. By contrast, the subsidization perspective, advanced by Graziani

and later politicized by Bossi's Northern League in the 1990s and 2000s, contends that the Southern economy depends heavily on compensatory welfare schemes and public sector wages financed through national fiscal transfers, to the alleged detriment of the North.

Our results underscore the importance of distinguishing between long-term structural patterns, captured by in-level GDP data, and more recent developments, captured by growth dynamics in the 2000s. The static analysis supports the subsidization perspective: government spending represents a larger share of GDP in the South than elsewhere. Non-market services, which despite increasing privatization remain predominantly public, continue to constitute the South's major sector. By contrast, manufacturing exports account for a much larger share of final demand in the North. The dynamic analysis tells a different story, however, pointing to Southern Italy's increasing dependency on trade with the North. From 2000 to 2007, the system of public subsidiarity sustaining the South was progressively dismantled, with government spending playing a declining role in final demand. Instead, regional exports—especially of intermediate goods and services—became the main driver of the South's poor GDP growth. Its largely stagnant economy, growing at under 1% annually, depended almost entirely on intra-country exports of low VA intermediate products to other Italian regions. Foreign demand accounted for a significantly smaller share of Southern GDP growth than elsewhere in Italy, reinforcing the South's dependence on Northern production systems.

How can we make sense of these empirical patterns? While a causal analysis lies beyond this article's scope, we suggest that the static analysis reflects the legacy of Southern Italy's entrenched economic structure, above all its historical reliance on the public sector and fiscal transfers from the central state. Since the post-WWII period, the Mezzogiorno's growth model has been anchored in public sector expansion, state interventionism, and fiscal redistribution, underpinned by three key institutional and policy pillars. This heritage still shapes the in-level shares of demand components in regional GDP.

First, the post-war Italian model of capitalism was characterized by the dominance of state-owned enterprises and 'public economic entities' (*enti pubblici economici*) operating in strategic sectors. These entities carried a political mandate to channel productive and infrastructural investments into the South to promote industrialization and employment (Shonfield 1974: 184–192). Second, the *Extraordinary Intervention for the Mezzogiorno* sought to reduce the industrial divide between North and South through three policy instruments: infrastructure investment via the *Fund for the South*; incentives for private and public investment; and hiring subsidies to reduce labor costs and stimulate employment (Barca 1997). Third, with the creation of the European Regional Development Fund (ERDF) in 1975, Italy became the largest beneficiary of EU structural transfers in the 1980s, particularly towards its underdeveloped Southern regions (Corte dei Conti 2013: 93, Table 1).

By contrast, our dynamic analysis of the 2000–2007 period points to a shift towards a dependency-based (non-)growth model, with Southern Italy increasingly reliant on the export of low VA goods and services to the North. This shift likely reflects profound structural transformations in all three pillars that had historically sustained the Southern growth model.

First, under the dual pressures of the Single Market and the launch of the euro, in the 1990s Italy implemented the largest privatization programme in the European Union (Barucci and Pierobon 2008; Baccaro and D'Antoni 2024), significantly reducing the role of state-owned enterprises. Given the legal obligation to allocate at least 60% of productive investments to the South, the dismantling of Italy's state capitalism disproportionately affected the Mezzogiorno (Sprovieri 2011). Second, in the early 1990s, the Italian government terminated the extraordinary intervention in the Mezzogiorno in response to the Maastricht treaty's fiscal rules on budget deficits and stricter state aid prohibitions (Trezzani 1995). With the turn of the century, Italy had de facto transitioned into a 'consolidation state' (Streeck 2015),

running high and persistent primary surpluses between 1995 and 2008 (Di Carlo and Simoni 2024), which progressively eroded the fiscal space available to support the Southern regional growth model (Petraglia and Scalera 2019). Third, the national cohesion policies that replaced the extraordinary intervention had a significantly narrower scope, and public investment in the South declined sixfold between 1992 and 2008 (Viesti 2021). At the European level, although Italy was the largest recipient of EU cohesion funds in 1986, receiving over one-quarter of total allocations, its share fell to just 8% in the 2007–2013 cycle (Corte dei Conti 2013; Tables 1 and 4), largely due to the accession of poorer Eastern European countries shifting the EU's cohesion focus eastward.

In short, the viability of a 'subsidized regional growth model' hinges on the fiscal capacity of the state to sustain interregional redistribution in support of local demand, employment, and social welfare. Our regional input-output analysis suggests that during the first decade of EMU, Southern Italy's growth model became increasingly constrained by the fiscal and regulatory architecture of the European Union and that the South paid the highest price.

The CPE literature has extensively documented how the economic governance structures of the EMU forced domestic demand-led Southern European economies into structural convergence with export-led growth models following Europe's sovereign debt crisis (Perez and Matsaganis 2019; Hein et al. 2021; Scharpf 2021). However, the literature has overlooked the differentiated implications of economic and monetary integration for countries with asymmetric regional growth models. Our dynamic analysis suggests that, even *before* the sovereign debt crisis, which pushed all peripheral Eurozone economies towards austerity (Perez and Matsaganis 2019), a regionally differentiated process of adjustment was underway in Italy. This was a process of 'competitive impoverishment' in Southern Italy, which forced the Mezzogiorno to relinquish its post-war model of subsidized (under) development, while Central and Northern regions remained less affected. National fiscal consolidation in the pre-crisis period led to Southern Italy's transformation into a weak export-led growth model, dependent on exports of low VA goods and services to Central and Northern regions.

Although we cannot currently investigate post-crisis developments due to data unavailability (the EUREGIO dataset ends in 2010), future research could gainfully investigate the within-country asymmetric effects of austerity on regional growth models and how the EMU has contributed to the restructuring of regional growth models and value chains across Europe.

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Appendices

Appendix A: Tables with GDP and GDP growth decomposition by component and sector

Table A1. GDP per capita and relative GDP contributions of final demand components between 2000 and 2007 (averages); GDP growth and relative GDP growth contributions of final demand components between 2000 and 2007 (averages).

Period	2000–2007 (share of GDP)													
Component	GDP per capita	C	G	I	X int to NW	X int to NE	X int to CE	X int to SO	X int to ROW	X fin to NW	X fin to NE	X fin to CE	X fin to SO	X fin to ROW
Italy	20253	46.06%	18.78%	15.01%					10.75%					9.41%
North-West	24814	30.05%	10.24%	9.15%		8.40%	5.51%	6.25%	9.12%		5.38%	3.33%	4.95%	7.61%
North-East	24252	28.58%	8.90%	9.84%	6.14%		5.24%	5.01%	8.20%	9.89%		4.25%	6.73%	7.23%
Center	22366	29.77%	11.03%	8.03%	7.24%	5.16%		5.79%	8.04%	6.76%	4.85%		6.87%	6.46%
South	13628	29.95%	21.94%	9.43%	4.10%	3.89%	5.26%		8.07%	3.05%	3.35%	4.00%		6.97%

Period	2000–2007 (share of GDP growth)													
Component	GDP growth	C	G	I	X int to NW	X int to NE	X int to CE	X int to SO	X int to ROW	X fin to NW	X fin to NE	X fin to CE	X fin to SO	X fin to ROW
Italy	1.13%	8.79%	29.60%	31.17%					26.71%					3.72%
North-West	0.99%	–5.94%	29.41%	16.23%		–8.16%	–4.68%	30.89%	25.45%		7.11%	–0.97%	10.63%	0.04%
North-East	1.17%	–3.18%	11.93%	16.62%	–8.95%		–6.19%	27.24%	19.48%	13.64%		3.66%	21.79%	3.96%
Center	1.62%	11.88%	9.81%	11.80%	–4.74%	–4.35%		24.78%	16.84%	2.60%	6.41%		20.02%	4.94%
South	0.85%	–73.03%	–19.46%	1.12%	44.09%	25.12%	31.07%		13.09%	27.67%	31.59%	30.57%		–11.83%

Table A2. GDP per capita and relative GDP contributions of sectors between 2000 and 2007 (averages); GDP growth and relative GDP growth contributions of sectors between 2000 and 2007 (averages).

Period	2000–2007 (share of GDP)					
	GDP per capita	Manufacturing	Low-end services	High-end services	Non-market services	Construction Commodities & energy
Italy	20,253	28.70%	22.73%	2.29%	24.63%	20.65%
North-West	24,814	35.69%	19.40%	2.82%	20.26%	22.14%
North-East	24,252	29.59%	24.40%	2.71%	22.29%	19.91%
Center	22,366	24.56%	23.65%	2.70%	26.85%	20.37%
South	13,628	22.13%	24.82%	0.80%	30.73%	19.60%

Period	2000–2007 (share of GDP growth)					
	GDP growth	Manufacturing	Low-end services	High-end services	Non-market services	Construction Commodities & energy
Italy	1.13%	3.98%	17.15%	9.09%	39.44%	46.16%
North-West	0.99%	–3.04%	12.88%	23.67%	42.93%	41.64%
North-East	1.17%	6.86%	12.92%	8.92%	30.05%	46.13%
Center	1.62%	15.14%	18.53%	4.20%	25.09%	42.55%
South	0.85%	–8.56%	27.83%	–5.48%	70.47%	59.53%

Appendix B: Figure and table with GDP and GDP growth decomposition by original disaggregated sectors

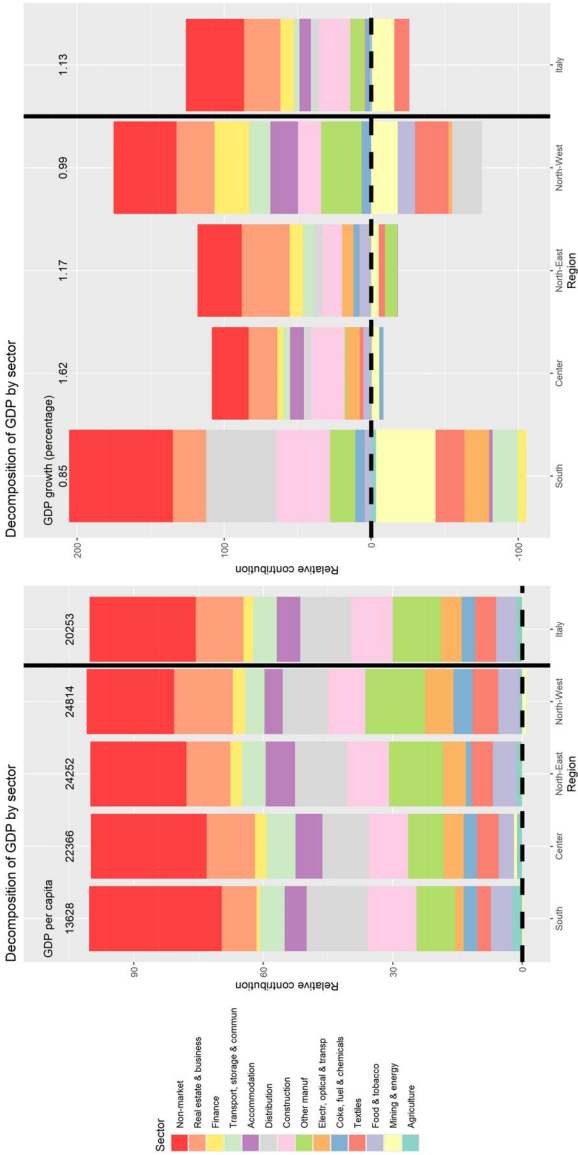


Figure B1. Average annual relative contributions to GDP and GDP growth of final demand components between 2000 and 2007 by original disaggregated sectors.

Table B1. GDP per capita and relative GDP contributions of original disaggregated sectors between 2000 and 2007 (averages); GDP growth and relative GDP growth contributions of original disaggregated sectors between 2000 and 2007 (averages).

Period	2000–2007 (share of GDP)														
Sector	GDP per capita	Agriculture	Mining & energy	Food & tobacco	Textiles	Coke, fuel & chemicals	Electr, optical & transp	Other manuf	Construction	Distribution	Accommodation	Transport, storage & commun	Finance	Real estate & business	Non-market
Italy	20253	1.28%	−0.27%	4.77%	4.84%	3.13%	4.8%	11.16%	9.63%	11.81%	5.46%	5.46%	2.29%	11.02%	24.63%
North-West	24814	0.63%	−0.93%	4.9%	5.92%	4.43%	6.6%	13.84%	8.51%	10.67%	4.26%	4.47%	2.82%	13.62%	20.26%
North-East	24252	1.22%	−0.11%	5.58%	4.88%	1.34%	5.3%	12.49%	9.73%	12.13%	6.78%	5.49%	2.71%	10.17%	22.29%
Center	22366	1.15%	0.72%	3.54%	5.02%	3.04%	4.71%	8.24%	9.15%	10.71%	6.27%	6.67%	2.7%	11.22%	26.85%
South	13628	2.31%	−0.39%	4.92%	3.18%	3.16%	1.99%	8.89%	11.48%	14.01%	5.11%	5.7%	0.8%	8.12%	30.73%
Period	2000–2007 (share of GDP growth)														
Sector	GDP growth	Agriculture	Mining & energy	Food & tobacco	Textiles	Coke, fuel & chemicals	Electr, optical & transp	Other manuf	Construction	Distribution	Accommodation	Transport, storage & commun	Finance	Real estate & business	Non-market
Italy	1.13%	−0.63%	−15.19%	0.89%	−10.17%	3.14%	0.9%	9.22%	21.28%	5.6%	7.65%	3.9%	9.09%	24.88%	39.44%
North-West	0.99%	0.04%	−18.11%	−11.76%	−22.72%	6.42%	−2.43%	27.46%	15.82%	−20.2%	18.73%	14.34%	23.67%	25.81%	42.93%
North-East	1.17%	0.33%	−5.2%	7.68%	−4.1%	4.02%	7.67%	−8.42%	13.41%	6.18%	−0.44%	7.18%	8.92%	32.72%	30.05%
Center	1.62%	−0.44%	−5.07%	5.3%	2.39%	−2.82%	9.09%	1.2%	23.07%	4.68%	9.33%	4.52%	4.2%	19.48%	25.09%
South	0.85%	−3.25%	−40.53%	4.43%	−19.59%	6.42%	−16.81%	16.99%	36.83%	47.53%	−2.35%	−17.36%	−5.48%	22.7%	70.47%

Appendix C: Figures and tables with GDP and GDP growth decomposition by component and sector by merging North-West and North-East

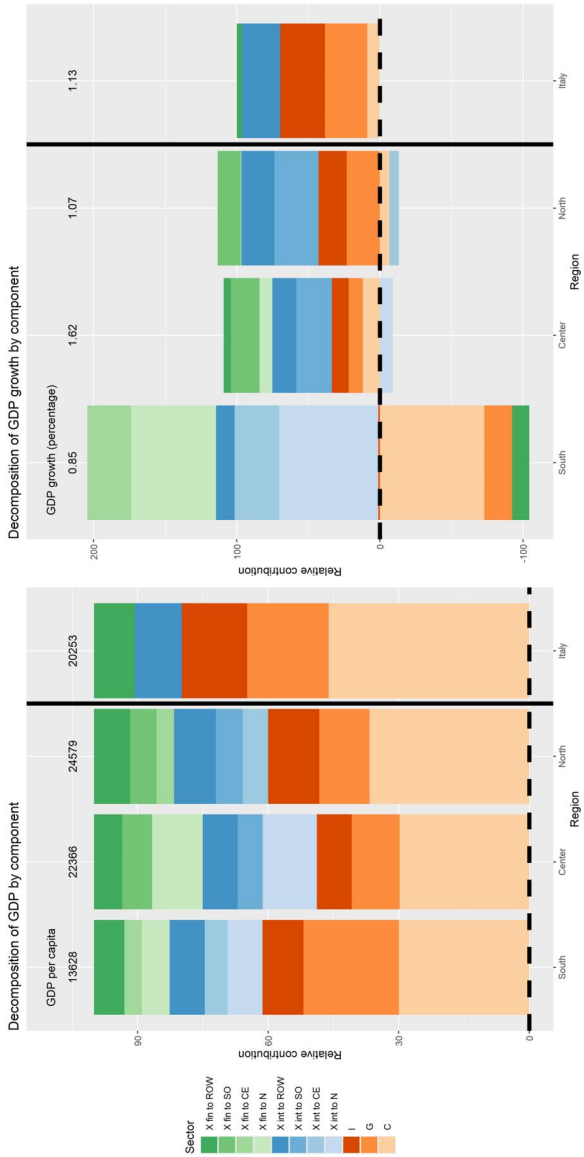


Figure C1. Average annual relative contributions to GDP and GDP growth of final demand components between 2000 and 2007 by merging North-West and North-East.

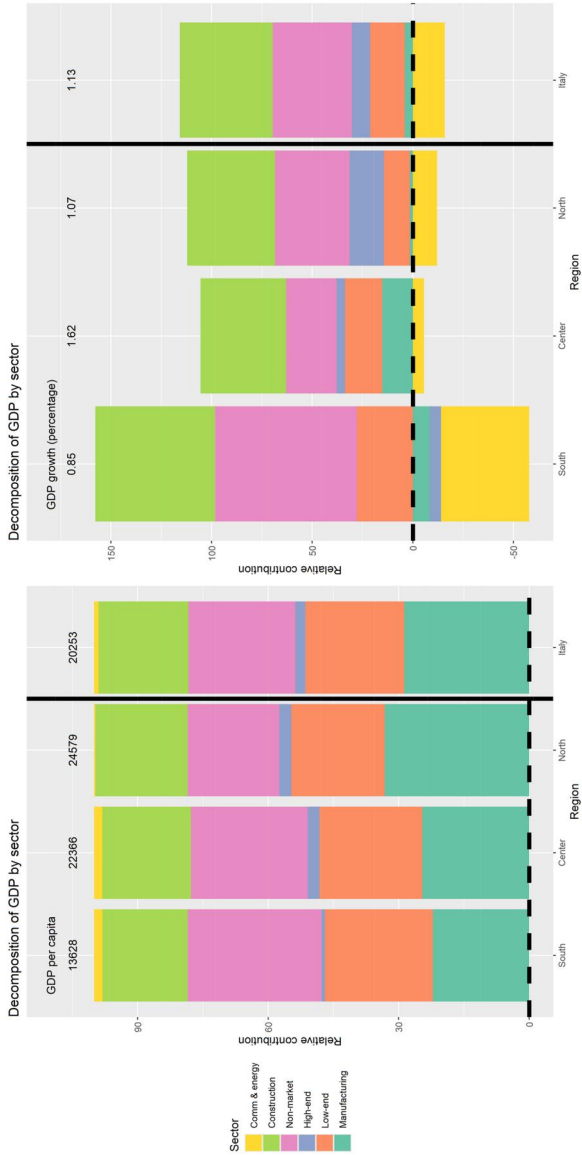


Figure C2. Average annual relative contributions to GDP and GDP growth of sectors between 2000 and 2007 by merging North-West and North-East.

Table C1. GDP per capita and relative GDP contributions of final demand components between 2000 and 2007 (averages); GDP growth and relative GDP growth contributions of final demand components between 2000 and 2007 (averages) by merging North-West and North-East.

2000—2007 (share of GDP)													
Period	Component	GDP per capita	C	G	I	X int to N	X int to CE	X int to SO	X int to rest	X fin to N	X fin to CE	X fin to SO	X fin to ROW
	Italy	20,253	46.06%	18.78%	15.01%	0%	0%	0%	10.75%	0%	0%	0%	9.41%
	North	24,579	36.69%	11.54%	11.79%	0%	5.82%	6.17%	9.62%	0%	4%	6.07%	8.3%
	Center	22,366	29.77%	11.03%	8.03%	12.4%	0%	5.79%	8.04%	11.61%	0%	6.87%	6.46%
	South	13,628	29.95%	21.94%	9.43%	7.99%	5.26%	0%	8.07%	6.4%	4%	0%	6.97%
2000—2007 (share of GDP growth)													
Period	Component	GDP growth	C	G	I	X int to N	X int to CE	X int to SO	X int to ROW	X fin to N	X fin to CE	X fin to SO	X fin to ROW
	Italy	1.13%	8.79%	29.6%	31.17%	0%	0%	0%	26.71%	0%	0%	0%	3.72%
	North	1.07%	−6.67%	23.2%	19.54%	0%	−6.52%	31%	22.96%	0%	0.61%	15.65%	0.22%
	Center	1.62%	11.88%	9.81%	11.8%	−9.09%	0%	24.78%	16.84%	9.01%	0%	20.02%	4.94%
	South	0.85%	−73.03%	−19.46%	1.12%	69.22%	31.07%	0%	13.09%	59.26%	30.57%	0%	−11.83%

Table C2. GDP per capita and relative GDP contributions of sectors between 2000 and 2007 (averages); GDP growth and relative GDP growth contributions of sectors between 2000 and 2007 (averages) by merging North-West and North-East.

Period	2000–2007 (share of GDP)						
Sector	GDP per capita	Manufacturing	Low-end services	High-end services	Non-market services	Construction	Commodities & energy
Italy	20,253	28.7%	22.73%	2.29%	24.63%	20.65%	1.01%
North	24,579	33.18%	21.46%	2.77%	21.09%	21.22%	0.28%
Center	22,366	24.56%	23.65%	2.7%	26.85%	20.37%	1.87%
South	13,628	22.13%	24.82%	0.8%	30.73%	19.6%	1.92%
Period	2000–2007 (share of GDP growth)						
Sector	GDP growth	Manufacturing	Low-end services	High-end services	Non-market services	Construction	Commodities & energy
Italy	1.13%	3.98%	17.15%	9.09%	39.44%	46.16%	−15.82%
North	1.07%	1.45%	12.9%	16.98%	37.1%	43.67%	−12.1%
Center	1.62%	15.14%	18.53%	4.2%	25.09%	42.55%	−5.51%
South	0.85%	−8.56%	27.83%	−5.48%	70.47%	59.53%	−43.79%

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