

Article

Growth model change in emerging economies: sectorial loci of growth and politics

Marius Kalanta*

Institute of International Relations and Political Science, Vilnius University, Vilnius, Lithuania

*Correspondence: kalanta.marius@gmail.com

Abstract

The article contributes to an ongoing debate in comparative political economy on the integration of the demand and supply sides in growth model (GM) analysis. In particular, the article focuses on the characteristics of export-led GMs in emerging economies and addresses questions of GM change. The article makes two contributions. First, for capturing differences between countries that adopt export-led growth, the article introduces the concept of a sectorial locus of growth. Second, the article links GM change to the interaction of politics and sectoral transformations that a country accumulated during the preceding GM. The article presents empirical support for its arguments from the cases of Estonia and Lithuania, which both recovered from the Global Financial Crisis by shifting from debt-led to export-led growth based, however, on different sectorial loci of growth: exports of low-quality manufacturing and services in Lithuania and exports of dynamic services in Estonia.

Key words: institutional political economy, growth, Eastern Europe, transitional economies, institutional change, institutional complementarity

JEL classification: P16 Capitalist Systems: Political Economy, O25 Industrial Policy, O43 Institutions and Growth

1. Introduction

The recent integration of demand-oriented analysis of growth models (GMs) from post-Keynesian economics (PKE) into comparative political economy (CPE) has addressed calls for reconsideration of how CPE sees macroeconomic and political drivers of economic growth (Schwartz and Tranøy, 2019; Stockhammer, 2022), and promised new fruitful avenues for studying contemporary capitalist economies in the post-varieties of capitalism

(post-VoC) era. This development has been reflected in the fast growth of GM analysis applications in CPE (Haffert and Mertens, 2021; Hassel and Palier, 2021a; Behringer and van Treeck, 2022). Yet, given the robust theoretical and empirical foundations of GM analysis in PKE and the further fast progress here, as well as the limitations of the first attempts to ‘rethink’ these foundations in CPE (Amable, 2022; Hein *et al.*, 2020; Kohler and Stockhammer, 2022), the contribution of GM analysis to the CPE research programme has still to be better systematized and further developed, and important divides between CPE and PKE resolved.

Demand-oriented analysis of GMs within PKE has evolved as a result of attempts to distinguish between the different ways countries have responded to the depressing effects of financialization on wage share and capital investment during recent decades in the developed world (Stockhammer, 2015; Hein and Martschin, 2021). This literature has progressed by conceptualizing differences between wage-led and profit-led demand regimes defined as structural features of the economy (Lavoie and Stockhammer, 2013), and developing taxonomies of demand and growth regimes defined as combinations of growth strategies and demand and growth drivers (further on I will use ‘demand and growth regime’ and ‘growth model’ interchangeably). One of the most elaborated of the taxonomies distinguishes between four regimes: export-led mercantilist, weakly export-led, debt-led private demand boom and domestic demand-led (Hein *et al.*, 2020; Hein and Martschin, 2021). Furthermore, GM shifts provoked by the Global Financial Crisis (GFC) have been extensively studied (Dünhaupt and Hein, 2019; Hein *et al.*, 2020; Hein and Martschin 2021; Akcay, *et al.*, 2022) and the causal links of these shifts with changes in growth drivers and macroeconomic policy regimes established (Hein and Martschin, 2021; Kohler and Stockhammer, 2022).

The PKE literature views GMs as highly volatile and links this volatility to the co-evolution of financial cycles, path-dependent effects of demand shocks, power relations, as well as institutions and macroeconomic policies serving as temporary stabilizers of the inherently dynamic economic system (Stockhammer, 2022). Hence, PKE assumes that GMs can change from one to another depending on changes in countries’ macroeconomic policy regimes comprised of monetary, fiscal, wage and economic openness policies as well as corresponding changes in partner economies (Hein and Martschin, 2021). In this framework, politics is reduced to government macroeconomic policy preferences, while relevant institutions are perceived as instruments under government control for the realization of these preferences.

From a CPE perspective, this view of GM change seems to ignore some important sectoral, political and institutional factors. First, CPE scholars see PKE’s GM types as too broad, thus hiding important within-type variations. As the VoC-based literature shows, the capacity to produce goods and services for exports is deeply rooted in a country’s industrial structures and complex institutional arrangements, and can significantly differ between countries (Hancké, 2002; Iversen and Soskice, 2013; De Ville and Vermeiren, 2014). While these differences might be of little relevance to PKE’s analytical purposes for explaining the effects of financialization, they are highly relevant to development-related inquiries within CPE, especially those addressing issues such as the failure to adopt export-led growth in Southern European countries (Stockhammer and Otero, 2023) or transition through the middle-income trap in emerging economies (Kalanta, 2023). To address this limitation, recent studies in CPE have proposed additional GM types such as high-quality or low-quality

manufacturing export-led, FDI-financed export-led and construction-led (Hassel and Palier, 2021b; Baccaro and Pontusson, 2022; Mertens *et al.*, 2022), however, these attempts still demonstrate a significant variation in their theoretical and methodological approaches.

Second, from a CPE perspective, the PKE's view of the political and institutional underpinnings of GMs seems to be too narrow and neglects important political actors and conditions of institutional change. Yet there are also divergent views in CPE where definitions of the core political agents of GMs range from electorally conditioned party-centred cross-class alliances defined as 'social blocs' (Amable, 2022), to organized business- and large firm-centred 'growth coalitions' (Baccaro and Pontusson, 2022), and to 'quiet politics' between state and business elites (Bohle and Regan, 2021). Views on the political agency range from seeing GMs as largely contingent outcomes of socio-political dynamics (Amable, 2022), to those that link political actors to GMs through implicit growth strategies (Hassel and Palier, 2021b) or explicit internalization of the functional requirements of an existing or preferred GM (Baccaro and Pontusson, 2022). Similarly, views of the institutional foundations of GMs range from highly inertial and deeply historically rooted institutionalized socio-political compromises (Amable and Palombarini, 2008) to path-dependent complimentary institutional architectures (Hassel and Palier, 2021b), and to political salience-dependent flexible institutions (Bohle and Regan, 2021; Baccaro and Pontusson, 2022).

There is still little consensus on how to integrate diverging views on the sectoral, political and institutional underpinnings of GM stability and change both between PKE and CPE, and within CPE. One obstacle for integration comes from recent empirical applications of GM analysis suggesting that GMs are more flexible in emerging than advanced economies (Hein *et al.*, 2020; Picot, 2021; Akcay *et al.*, 2022). Over the course of the GFC, advanced economies mostly experienced changes *within* the broad types measured on a binary scale of domestic demand-led versus export-led GMs, that is they were more likely to change between variants of domestic demand-led or variants of export-led GMs. In contrast, emerging economies were more likely to shift *between* the broad types, that is from a variant of domestic demand-led growth to a variant of export-led growth or vice-versa.

From this divide it appears that, while the existing integrations of GM analysis in CPE can well explain the relative stability of GMs in advanced economies (which, of course, does not imply stability from the PKE perspective), their capability of explaining GM changes in emerging economies and fully accounting for their inherent instability and vulnerability is still limited. On the other hand, the CPE contributions to GM analysis also clearly demonstrate that there exist limits to GM flexibility unaccounted for by PKE.

This article contributes in two ways to integrating GM analysis into CPE. First, for capturing within-type differences, the article introduces the concept of a *sectoral locus of growth* defined as industrial and institutional capacities to utilize certain sources of aggregate demand. Second, the article proposes an explanation of GM change in dependent market economies (DMEs), a subtype of emerging economies (Nölke and Vliegenthart, 2009; Schedelik *et al.*, 2021). The explanation links a GM change to the interplay between political dynamics and historically shaped sectoral structures.

To achieve its aim, the article synthesizes a framework composed of the following components. First, the article builds its analysis on the PKE taxonomy of GMs proposed in Hein *et al.* (2020), but complemented with sectoral loci of growth. Second, the article views GMs in emerging economies as flexible but also as having certain limits to this flexibility.

It derives GM flexibility from the political and sectoral dynamics inherent to emerging economies in a variety of forms such as higher political volatility and lower levels of interest group institutionalization as well as more active developments in the productive capacities as these economies follow simultaneous paths of industrialization and deindustrialization (Whittaker *et al.*, 2020). Yet the limits to GM flexibility are associated with historically shaped sectoral structures, which play a role in determining available growth strategy choices and the composition of the social bloc.

The framework is illustrated with the empirical cases of Estonia and Lithuania, two highly internationalized DMEs, which both recovered from the GFC by shifting their GMs from debt-led to export-led. This shift, however, hid important details. Although both countries to a large extent experienced similar trajectories through large capital inflows-based debt-led private demand booms and consequent busts, produced similar internal devaluation-based policy responses, and consequently started to rely increasingly on foreign demand, the ways they made use of this demand diverged. While Estonia adopted a dynamic services-driven weakly export-led GM, exports of low-quality goods and services played a major role in Lithuania, resulting in an export-led mercantilist GM. The cases of Estonia and Lithuania are thus good examples of how sectoral changes accumulated during the earlier capital inflows- and debt-led period of growth were politically supported and institutionally mediated, which resulted in important economic specialization-related differences in the subsequent foreign demand-led period of growth.

The article is structured as follows. In the next section, I discuss the main theoretical questions related to GM change in DMEs and emerging economies more generally and introduce my framework. Then I present the main empirical facts relating to the sectoral basis of the GM changes in Estonia and Lithuania and turn to the political factors that underpinned these changes during the GFC. Lastly, I conclude.

2. GMs and their underpinnings in emerging economies

This section presents a framework of GM change in emerging economies. In this framework, a GM change is conditional on an interplay between political dynamics and historically shaped sectoral structures. While politics is seen as an active driver of change, the sectoral structure is a path-dependent historical condition that sets limits on the range of available GMs and determines the capacity of a new GM to generate growth.

2.1 GMs and sectoral loci of growth in emerging economies

The PKE literature on the effects of financialization on growth has produced an elaborated taxonomy of GMs (Dodig *et al.*, 2016; Detzer, 2018; Hein, 2019). In its recent applications, the taxonomy has proven well suitable for analysing both advanced and emerging economies (Dünhaupt and Hein, 2019; Hein *et al.*, 2020; Hein and Martschin, 2021; Akcay *et al.*, 2022). Based on growth contributions of the main demand aggregates and the financial balances of the macroeconomic sectors, this taxonomy distinguishes between two variants of GMs reliant on domestic demand and two variants of GMs reliant on exports as the main source of economic growth.

Differences between the variants of GMs that rely on domestic demand are based on which sector of the economy consumes more than it earns and thus generates extra demand and growth. If it is the government sector via government consumption and/or the

corporate sector via investment, the GM is said to be domestic demand-led. If the main source of demand is household consumption, a debt-led private demand boom GM is in place.

Both variants of export-led GMs are distinctive in that the major source of their aggregate demand comes from abroad. The difference between the variants is in the intensity of the role exports play in generating economic growth. If this role is strong via the high contribution to growth of net exports and high current account surpluses, the GM is export-led mercantilist. If this role is moderate either because of the negative growth contribution of net exports or current account deficits, the GM is weakly export-led. Placing all four types on a scale, debt-led private demand boom and export-led mercantilist GMs would occupy two opposite extremes, while domestic demand-led and weakly export-led GMs would more resemble intermediary types (Detzer, 2018).

A key question is what drives the adoption of one or another GM? A general line of reasoning is that, if a country adopts a certain GM, it must be the result of its capacity to make use of certain sources of aggregate demand and employ certain growth contributions. Recent PKE literature links this capacity to growth drivers comprised of macroeconomic policies and structural characteristics of the economy. For Kohler and Stockhammer (2022), the most important growth drivers in advanced and emerging European economies are expansionary wage and discretionary fiscal policies for domestic demand-led growth, asset price inflation and household debt growth for debt-led growth, and high economic openness and non-price competitiveness for export-led growth. Hein and Martschin (2021) go further by arguing that what matters is not single monetary, fiscal, wage and competitiveness policies but a coordinated mix of all of them, defined as the macroeconomic policy regime.

Several other contributions, while building on Kohler and Stockhammer (2022), attempt to further expand the list of growth drivers. by considering research-led technological progress and capital inflows (Stockhammer and Otero, 2023) and commodity prices and FDI (Jungmann, 2023) as potential growth drivers of export-led growth, and income distribution and debt of non-financial corporations as potential drivers of domestic demand-led growth (Jungmann, 2023). Nevertheless, these contributions have found house prices, private debt and fiscal policies to be the most important growth drivers in post-GFC South European countries and some emerging economies.

The literature so far has mainly focused on quantitatively testing hypotheses on the impact of a variety of growth drivers on GDP growth and viewed growth drivers as better conceptual alternatives to GMs. My focus, however, is on the mechanism of GM change and the question I broadly ask is how and why growth drivers change over time and lead to a GM change. To answer this question, while building on the existing literature, I view the two approaches not as substitutes but on different analytical levels located complements of each other.

More specifically, my question is how, when and why new growth drivers emerge and consequently complement or replace those currently driving growth. Some answers can be deduced from growth drivers themselves. While different in nature, they all depend on a favourable combination of domestic and foreign conditions. House prices are cyclical by nature and strongly depend on external financial conditions, but they also depend on domestic housing and financial institutions such as those encouraging private homeownership and mortgage credit (Kohler *et al.*, 2023). Enacting fiscal policies as a growth

driver also depends on both: the redistribution-related domestic political processes and a country's position in international markets for sovereign debt (Stockhammer and Otero, 2023). Similarly, price and non-price competitiveness that underpins export-led growth largely depends both on foreign demand for the goods and services a country exports, and domestic supply-side productive capacities and institutional structures.

As many relevant foreign conditions are shaped by international politics and financial and economic cycles, from a country's perspective, especially if it is an emerging economy, its ability to control these conditions is limited. It can, however, control its domestic conditions, including those such as economic and financial openness that improves the receptivity to impacts from abroad. Enacting growth drivers domestically requires building different capacities, which involves different political and institutional processes and time horizons. The capacity to enact fiscal policies for growth is shaped by many nuances of redistributive and welfare politics and the capacity of the government sector as a whole (Beramendi *et al.*, 2015). Meanwhile, building productive capacities for exports rests on a different logic such as that dictated by complementary institutional domains as in the VoC framework (Hall and Soskice 2001), or the logic of industrial upgrading as in the development-oriented CPE literature (e.g. Wade, 2010; Doner and Schneider 2016). Thus, sectoral dynamics seems to be key for the enactment of certain growth drivers for growth.

Furthermore, emerging economies tend to experience larger sectoral dynamics than advanced economies. The latter are more likely to experience only long-term paradigmatic changes in their productive structures (Hall, 2021). Meanwhile, as the development literature shows, emerging economies are still searching for development and growth paths, thus their development might be less stable and productive structures more fluid because of constraints of 'compressed development', in which industrialization is soon followed by 'premature deindustrialisation' (Rodrik, 2015; Whittaker *et al.*, 2020), or challenges posed by the middle-income trap (Kharas and Kohli, 2011).

If sectoral dynamics are key to growth driver changes capable to lead to GM changes and if sectoral differences are a key source of differences between advanced and emerging economies, a study of mechanisms of GM change would benefit from a perspective that sees growth drivers not as emerging separately and in isolation but as products of institutional and political dynamics within sectors. Recent studies in CPE have already made valuable attempts to account for sectoral differences in advanced and emerging economies by introducing a wider range of export-led GM subtypes such as GMs driven by exports of commodities and low-quality manufacturing (Mertens *et al.*, 2022), exports of high-quality manufacturing and dynamic services (Hassel and Palier, 2021b) and FDI-financed exports (Hassel and Palier, 2021b; Ban and Adascalitei, 2022).

For a more integrated account of a broader domestic sectoral and institutional context that underpins growth driver changes capable to lead to GM changes and at the same time reflect differences between advanced and emerging economies, I propose a synthesized framework in which the PKE taxonomy of GMs and growth drivers is complemented with the sectoral dimension. I call this dimension a '*sectoral locus of growth*' and define it as a key sector of the economy and relevant institutions that together enable the economy to employ certain growth drivers and hence utilize certain growth contributions. Table 1 presents this framework.

The primary value of this framework is to organize lower-level growth drivers around key sectors of the economy and in such a way help to better account for sectoral dynamics

Table 1. GMs and sectoral loci of growth

GMs	Sectoral loci of growth (<i>key institutions</i>)	Growth drivers
Export-led mercantilist	Commodity manufacturing	Commodity prices, price competitiveness, FDI
Weakly export-led	(<i>wage-setting</i>)	
	Low-quality manufacturing and services	Price competitiveness, FDI
	(<i>wage-setting</i>)	
	High-quality manufacturing	Non-price competitiveness, technological progress
	(<i>skill-formation, innovation capabilities, wage-setting</i>)	
	Dynamic services	Non-price competitiveness, technological progress
	(<i>skill-formation, innovation capabilities</i>)	
Domestic demand-led	Government sector	Fiscal policy
	(<i>redistribution</i>)	
Debt-led private demand boom	Financial sector	Financial inflows, private debt
	(<i>financial openness</i>)	House prices
	Housing (<i>ownership and rent regulation</i>)	

Source: Author's compilation based on Hein and Martschin (2021), Kohler and Stockhammer (2022), Hassel and Palier (2021), Mertens et al. (2022), Stockhammer and Otero (2023) and Jungmann (2023).

that underpin GM changes. While the PKE literature has already identified the financial and housing sectors and the government sector as important sectoral loci of growth of debt-led private demand boom and domestic demand-led GMs, respectively, I add to the list a more nuanced view of sectoral loci of growth of export-led GMs. These additional sectoral loci of growth facilitate the differentiation between export-led GMs in advanced and emerging economies. If an emerging economy adopts export-led growth, it is most likely to be driven by exports of commodities or low-quality manufacturing or services. Yet, exports of high-quality manufacturing and dynamic services to a large extent are sectoral loci of growth of advanced economies. Different loci of growth imply very different productive capacities and institutions, and politics supporting them.

Importantly, the concept of a sectoral locus of growth helps to account for latent dynamics preceding a GM change. The existing literature commonly presumes that political economies typically have the capacity to meet the functional requirements of *all* GMs only favourable combinations of domestic and international conditions need to emerge. However, this literature tends to neglect that the adoption of a new GM might require structural changes. Also, there can be situations, especially in emerging economies, when a country adopts a completely new GM, which it has never had before. For example, a country can adopt an export-led GM after many years of following a domestic demand-led or debt-led private demand boom GM. Or it can switch between sectoral loci of growth while still remaining an export-led GM.

In any case, structural changes need time. This is so with productive capacities as well as institutions supporting them even if both appear to be more fluid as in the case of emerging

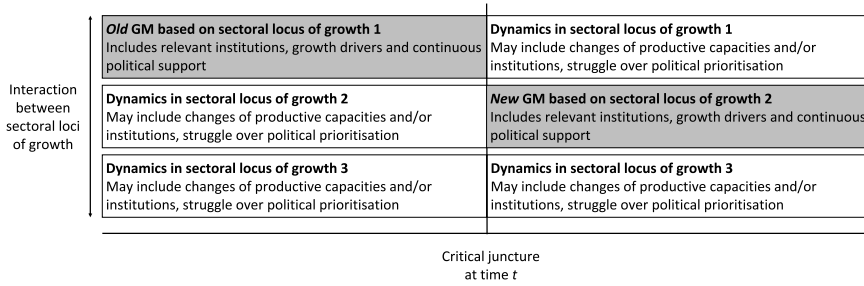


Figure 1. Basic model of GM change.

economies. Thus, relying on a new sectoral locus of growth and consequently switching to a new GM cannot happen at once but should result from gradual changes in other sectoral loci of growth accumulated during previous incarnations of the GM. I demonstrate this in my basic model of GM change in Figure 1.

In this model, a critical juncture, such as an external shock or political or systemic crisis, leads to an exhaustion of the existing (old) GM based on a particular sectoral locus of growth. The country’s capacity to resume growth by adopting a new GM depends on the growth potential in the other sectoral loci of growth, which, in turn, depends on the nature of changes during the old GM these other sectoral loci of growth have undergone, such as the expansion of the productive capacities and relevant changes in institutions to support this expansion as well as winning political support.

An important dimension of the model is the interaction *between* sectoral loci of growth. A sectoral locus of growth of the existing GM can have effects on changes in other sectoral loci of growth and hence their potential to drive growth in the next incarnation of the GM. To list few possible interaction effects, a government sector-based domestic demand-led GM, if it adopts a social investment-oriented pattern of redistribution (Beramendi *et al.*, 2015), can have positive effects via skill-formation on the expansion of the productive capacities in the high-quality manufacturing and dynamic services sectoral loci of growth. Similarly, a low-quality manufacturing-based export-led GM can have restraining effects via high preferences towards low levels of redistribution on the possibilities of the government sector to generate growth in the future. Also, a financial sector-based debt-led private demand boom GM can provide a positive impetus via the economic specialization for the expansion of the productive capacities for the dynamic services-based export-led GM.

2.2 Politics

Not all dynamics within sectoral loci of growth can lead to a GM change. To result in a GM change, these dynamics should include the expansion of the productive capacities as well as supportive institutional changes but also the accumulation of political power. Thus, politics emerges as an important driver of the dynamics within sectoral loci of growth.

A growing literature in CPE accepts the concept of social blocs as having many advantages for studying the politics of economic growth in capitalist economies (Amable, 2017; Baccaro and Pontusson, 2019; Haffert and Mertens, 2021; Rothstein, 2021; Akcay and Jungmann, 2022; Mertens *et al.*, 2022). In the original formulation, Amable and Palombarini (2008) define social blocs as cross-class alliances of socio-economic groups

united by common ideologies and mediated by political parties. Specifically for the purposes of GM analysis, [Baccaro and Pontusson \(2019\)](#) propose to view social blocs primarily as cross-sectoral alliances mobilized around key sectors of the economy competing with each other over establishing or sustaining their preferred GM by winning support from political parties and the government (in their later contribution, [Baccaro and Pontusson \(2022\)](#) have modified their approach into 'growth coalitions', however, retaining the key characteristics). Both notions imply some sort of organizational capacity for interest mobilization and representation along class or sectoral lines, suggest a tight coupling between social blocs and GMs, and have been developed for explaining GM stability and change in advanced economies. This view of politics, however, seems far from the reality of emerging economies.

Several characteristics make the study of the politics of growth in emerging economies different from those in advanced economies. First, emerging economies are characterized by higher volatility of electoral and coalitional politics making the implementation of long-term political strategies more difficult, by weak corporatist institutions and less organized civil societies resulting in higher embeddedness of economic sectors and business groups in the political sphere, and by high levels of inequality and informality making cooperation between socioeconomic actors less likely ([Doner and Schneider, 2016](#); [Jahn, 2016](#); [Vandor et al., 2017](#); [Jastramskis et al., 2021](#); [Mertens et al., 2022](#)).

In this context, viewing social blocs as cross-class or cross-sectoral alliances seems to be less useful. Low interest-group mobilization suggests that business associations and unions are not the main forms of interest representation in social blocs in emerging economies. Similarly, weak civil society organizations suggest that these economies have a limited number of institutionalized channels available to socio-political groups for voicing their demands and pressing for compromises. Contrarily, many socio-economic groups such as wage earners are more likely to have only limited access to politics during periods between elections and might be more willing to use 'exit' opportunities, which, particularly in DMEs, became increasingly available after EU accession ([Meardi, 2007](#)).

Instead, in emerging economies, when it comes to changing political landscapes within sectoral loci of growth, one should look for an informal basis for socio-political group mobilization and struggle for the inclusion in the social bloc. A possible channel here can be informal network-based interpersonal and reciprocal relationships between business and the state including owners and managers of large business groups on one side and state bureaucracies and elected political leaders, notwithstanding their frequently short-lasting terms, on the other. The centrality of such informal relations-based mechanisms underpinning the aggregation of the social bloc has already been demonstrated by [Mertens et al. \(2022\)](#) for Brazil and [Bohle and Regan \(2021\)](#) for Hungary and Ireland.

Another distinctive feature of emerging economies is the relatively high levels of internationalization via FDI, international trade and integration in global value chains ([Nölke, 2019](#)). This is especially the case in DMEs, where foreign investors can exert direct influence on politics and occupy a strong position within the social bloc ([Bohle and Regan, 2021](#); [Ban and Adascalitei, 2022](#)). Furthermore, due to the conditionality of the EU and in some cases EMU accession, DMEs might be more receptive to recommendations from supranational governing bodies but also multilateral organizations such as the European Commission or the OECD. This not only prevents domestic political actors from adopting more

protectionist industrial policies, which is more common in state-permeated market economies, but also implies a higher external influence on domestic politics in general.

Summing up, the central political driver within sectoral loci of growth and hence of GM change in DMEs, as can be expected, is informally based social blocs with businesses from key sectors of the economy at the core. Yet, the composition of this core may vary depending on the power balance and interest compatibility between domestic enterprises and foreign investors. Weak mobilization and organizational capacities prevent other socio-economic groups from exerting any stronger influence on the social bloc. Although the government composition may change frequently due to high electoral volatility, governments remain highly responsive to business demands and associate them with economic growth. External conditionality, however, exerts balancing this responsiveness with key standards of the democratic politics and the market economy.

3. Transformation of GMs in Estonia and Lithuania

In this section, I apply the theoretical framework for an empirical analysis of GM changes in Estonia and Lithuania. I base my empirical strategy on the most similar case selection method, which is considered well suited for testing hypotheses on what differences in the independent variable are responsible for differences in the dependent variable within similar background conditions (Seawright and Gerring, 2008). Estonia and Lithuania closely meet these design requirements. They are both seen as similar in terms of their soviet legacies, post-communist transitions and current institutional characteristics (Bohle and Greskovits, 2012). Furthermore, they both responded to the GFC within the same broad paradigm of internal devaluation. My aim is to reveal what differences within this common response and developments during the previous GMs can be linked to differences in the subsequent export-led GMs.

3.1 GM change

Baltic GMs have received some attention in the GM literature. However, the account is still incomplete as the literature neglects either GM changes or sectoral differences between the countries. From a CPE perspective, Bohle (2018) finds dependent FDI-driven debt-led GMs in all three Baltic States, which remained stable but delivered lower growth rates after the GFC. Based on a qualitative assessment, Avlijaš *et al.* (2021) also find similar and stable GMs in all three countries. In contrast, studies relying on a PKE-based quantitative assessment find evidence of GM change. Dünhaupt and Hein (2019) show a GM change from debt-led private consumption boom to export-led mercantilist during the GFC in Estonia and Latvia. Similarly, Picot (2021) argues for Estonia having a finance-led GM before the GFC and an export-led GM afterwards. However, neither study covers Lithuania.

For assessing GMs in Estonia and Lithuania I proceed in two stages. First, I determine the GM type before and after the GFC by applying the method based on demand contributions and sectoral financial balances proposed by Hein *et al.* (2020) but also used in Dünhaupt and Hein (2019), Hein and Martschin (2021) and Akcay *et al.* (2022). Then I assess key sectoral loci of growth by analysing the counties' export profiles and sectoral structures.

Table 2 presents data for the first stage. Its reading is straightforward. Both countries had debt-led private demand boom GMs before the GFC and shifted to export-led GMs after the GFC: weakly export-led in Estonia and export-led mercantilist in Lithuania. While before the GFC the largest demand contribution to GDP growth was private consumption

Table 2. Demand contributions and sectoral financial balances in Estonia and Lithuania

	Estonia		Lithuania	
	2000–2007	2010–2017	2000–2007	2010–2017
Real GDP growth rate, %	8.0	3.5	7.6	3.4
Growth contributions, percentage points:				
Domestic demand including inventories	10.8	4.0	9.4	3.2
- Gross fixed capital formation	4.6	1.7	2.8	1.2
- Private consumption	5.0	1.6	5.9	1.9
- Public consumption	0.5	0.4	0.5	-0.1
Net exports	-3.1	-0.2	-1.8	0.3
Net exports of goods and services, % of nominal GDP	-6.9	4.0	-7.6	0.2
Financial balances, % of nominal GDP:				
Private sector	-10.7	3.2	-5.6	5.0
- Private household sector	-3.9	0.9	-0.2	-1.3
- Corporate sector	-6.8	2.2	-5.5	6.4
Public sector	1.4	0.1	-1.6	-2.7
External sector	10.0	-3.3	6.4	-2.3

Source: AMECO Database.

and the private household sector ran the largest financial deficits, after the GFC the role of private consumption in GDP growth diminished, the financial balance of the private sector turned positive and the external sector negative alongside the trade balance turning positive. In addition, in Lithuania, the growth contribution of net exports turned positive, which indicates stronger reliance on exports. It is also important to note that my classification of the post-GFC Estonian GM as weakly export-led differs from [Dünhaupt and Hein's \(2019\)](#) view of it as export-led mercantilist. This difference is solely driven by year 2009, which I excluded from my periodization as a strong outlier characterized by a high demand contribution of net exports, which, however, was mainly a result of the contraction of imports and negative GDP growth.

To place this in a more nuanced context, the pre-GFC period of debt-led growth generated historically high growth rates in all three Baltic States, at the time called 'the Baltic Tigers'. In 2000–2007 real GDP grew by 8% in Estonia and 7.6% in Lithuania on average annually. This impressive growth was largely stimulated by wages and private credits. During 2000–2007, real wages grew by 76% in Estonia and 90% in Lithuania (AMECO database, [2023b](#)). By the end of 2007, Estonia and Lithuania had private credit stocks of a magnitude exceeding 50% of GDP—one of the largest in CEE ([Brixiova et al., 2010](#)). Of this, consumer lending and household mortgages constituted around 50% in Estonia and 40% Lithuania, while another approximately 25% and 15%, respectively, went for crediting commercial real estate ([IMF, 2009a, b](#)).

The macroeconomic environment was favourable for fast private credit growth. The successful establishment of Euro-anchored fixed exchange rate regimes (Estonia pegged its

currency to the Euro in 1999 and Lithuania in 2002) as well as the positive prospects of EU and NATO accession in the early 2000s granted Estonia and Lithuania increased confidence in international financial markets (Staeher, 2015). As a result, both countries experienced massive net capital inflows, which during 2003–2007 cumulatively amounted to 111% in Estonia and 85% in Lithuania as a share of 2003 GDP (IMF, 2010b).

The largest share of the net capital inflows came through banks. From the early 2000s, the banking sectors in both countries were highly concentrated and dominated by wholly owned subsidiaries and branches of Nordic banks. Acting in an environment of high competition, the banks stimulated domestic demand by setting nominal interest rates comparable to their home markets, which, given higher inflation rates exceeding 5% by 2007, also meant that real interest rates were negative in both countries.

Estonian and Lithuanian debt-led private demand boom GMs were exhausted by the onset of the GFC. By late 2008, accessibility to private credit had come to a complete halt. As a result, demand for housing, consumption, investment and exports collapsed, bringing down asset prices. By the end of 2009 compared to the peak, housing prices alone had fallen by 48% in Estonia and 37% in Lithuania (OECD, 2023b). The collapse of the GMs resulted in what was, by global standards, an exceptional GDP contraction of around 15% (Kuokštis and Vilpišauskas, 2010).

Serving as a critical juncture, the GFC provoked GM changes, and both countries recovered by more heavily relying on exports as a source of growth. In 2010 alone, exports of goods and services grew by 24.2% in Estonia and 16.8% in Lithuania returning the total value of exports in each country to its highest pre-crisis level in just one year (AMECO database, 2023a). A similar high growth of exports continued in 2011 but slowed afterwards, nevertheless, still remaining relatively strong. As a result, both economies became more internationalized than they were during the debt-led GMs. Their exports-to-GDP ratios grew from around 50% before the GFC to more than 70% afterwards (AMECO database, 2023a).

Next, I look into the sectoral compositions of the export-led GMs in Estonia and Lithuania. For capturing specific nuances, I distinguish between low-quality and high-quality manufacturing and between dynamic and low-quality services. I operationalize the former by using Eurostat's aggregation of low and medium-low technology (LMLT) and high and medium-high technology (HMHT) goods. To operationalize the latter, I use Eurostat's aggregation of knowledge-intensive (KI) services but with the exclusion of welfare and some other services that are either publicly provided, or non-tradable.

I perform the analysis of the sectoral compositions in two stages. First, I compare both countries' export profiles at a point in time when the export-led GMs should have consolidated, which was 2015–2017. Then I compare both countries' sectoral compositions synchronically and diachronically, aiming to identify sectors with the largest contribution to GDP. For this purpose, I add two additional points in time: 2000–2002, which represents both countries' positions before they entered the EU, and 2005–2007, which represents the peak of debt-led growth. However, largest sectors are not necessarily at the core of growth. For assessing the sectors' capability to drive growth, I analyse their contribution to the total profits of the economy assuming that a sector is an important contributor to growth if its share of total profits exceeds its share of total value added. Thus, I consider that the capacity of a sector to drive growth is determined by both its size and profitability. Table 3 summarizes the results.

Table 3. Sectoral characteristics of GIMs in Estonia and Lithuania

	Estonia			Lithuania		
	2000 – 2002	2005 – 2007	2015 – 2017	2000 – 2002	2005 – 2007	2015 – 2017
Exports, % of total^a						
LMLT ^b goods			38.0			48.8
HMHT ^b goods			28.7			26.0
Dynamic services			15.2			4.9
Non-dynamic services			18.1			20.3
Value added, % of total						
Manufacturing	17.6	16.2	15.9	18.9	19.1	18.9
- LMLT ^b manufacturing	14.8	12.5	11.6	13.8	13.5	14.2
- HMHT ^b manufacturing	2.6	3.4	3.8	3.2	3.5	3.6
Dynamic services ^c	13.4	14.2	15.7	9.5	10.4	9.9
- Information and communication	5.1	4.5	5.6	4.9	3.9	3.5
- Financial and insurance services	4.3	4.4	4.3	2.1	2.9	2.1
Real estate services	11.2	9.4	10.3	6.6	6.5	6.7
Land transportation services	4.4	3.9	3.1	5.1	6.2	7.7
Construction	6.0	9.6	6.5	6.1	9.5	6.9
Gross operating surplus, % of total						
Manufacturing	15.0	12.5	12.6	17.7	19.1	23.0
- LMLT ^b manufacturing	12.6	8.6	8.8	13.7	12.0	16.3
- HMHT ^b manufacturing	2.2	3.4	3.8	2.0	3.6	4.7
Dynamic services ^c	16.7	18.0	18.1	11.4	13.1	8.6
- Information and communication	7.2	5.8	4.8	6.8	5.0	2.0
- Financial and insurance services	6.2	7.1	8.4	1.3	3.2	2.1
Real estate services	18.0	14.9	23.0	8.6	9.5	10.7
Land transportation services	4.4	2.1	1.1	7.1	8.4	10.3
Construction	8.1	12.4	5.9	6.6	10.1	6.4

^aThe structure of exports is shown only for 2015 – 2017 as only this period refers to export-led growth.

^bLow and medium-low technology' (LMLT) and 'High and medium-high technology' (HMHT) are aggregations of the manufacturing sector based on the Eurostat's classification. A detailed list of included activities is provided in [Appendix 1](#). Coke and petroleum products and pharmaceuticals were excluded due to no available data.

^c'Dynamic services' is an aggregation of KI services from the Eurostat's classification but with the exclusion of 'Other knowledge-intensive services'. A detailed list of included activities is provided in [Appendix 1](#).

Data are averaged for the periods. *Data sources:* exports from AMECO Database and European Innovation Scoreboard 2021 Database; value added and gross operating surplus from Eurostat's National Accounts Database.

In 2015–2017 export-led GMs in Estonia and Lithuania were underpinned by different export profiles. Lithuanian exports were dominated by manufactured goods with around 75% share of total exports, and in particular LMLT goods with almost 50% of the total. The remaining quarter came from services mainly comprised of low-quality services such as land transportation. In contrast, in Estonian exports, the share of manufactured goods was smaller, mainly due to significantly lower exports of LMLT goods, and a share of dynamic services three times higher.

The sectoral compositions of the two countries echo their export profiles. In 2015–2017, the manufacturing sector was slightly larger in Lithuania than in Estonia with around 19% and 16% of GDP respectively. This difference mainly came from the LMLT part of the sector, while shares of HMHT manufacturing were equal between the countries. Thus, the Lithuanian manufacturing sector was larger and more reliant on low-quality production. Furthermore, LMLT manufacturing was an important driver of growth in Lithuania with a larger contribution to national profits than to GDP (16.3% versus 14.2%); in contrast, in Estonia, it was less profitable (8.8% versus 11.6%). Importantly, in the early 2000s LMLT manufacturing was a larger and more profitable sector but has since shrunk in Estonia, while remaining of the same size but increasingly profitable in Lithuania.

As regards services, both in terms of size and profitability dynamic services have become increasingly more important for the Estonian economy, compared to low-quality services for the Lithuanian economy. By 2015–2017, in Estonia, the contribution of dynamic services to GDP grew to 16% and the contribution to total profits reached 18%. In contrast, in Lithuania, the dynamic services' profit-generating capability decreased, so their share continuously stagnated at around 10% of GDP. Within dynamic services, ICT services were 60% larger in Estonia than Lithuania and financial and insurance services twice as large. In Estonia, financial and insurance services contributed to total profits by an exceptional 8%, twice exceeding their contribution to GDP. Another extreme in Estonia was real estate services with a 10% contribution to GDP and a spectacular 23% contribution to national profits. This was likely due to financialization, but was also an effect of the increased tradability of real estate services. In contrast, with around 8% of the economy, more than twice as large as in Estonia, and around 10% of national profits, more than the entire dynamic services, Lithuania stood out in its size of land transportation, essentially a low-quality but highly tradable service.

3.2 Price competitiveness of export-led GMs

Following the well-established argument in the literature that exports of low-quality manufacturing and services are more price sensitive than exports of dynamic services, it can be expected that sectoral differences between the newly adopted GMs in Estonia and Lithuania should have been reflected in different dynamics of their price competitiveness and wage costs. Thus, improvements of price competitiveness should have been larger in Lithuania than Estonia.

Changes in the real effective exchange rate (REER) prove this expectation. During debt-led growth in 2000–2008, Estonian REER appreciated twice as fast as the Lithuanian (Figure 2). Nevertheless, during the GFC it was Lithuania that saw a larger relative depreciation. In 2010, the first year after the GFC, the REER was lower by 10% in Lithuania and 5.5% in Estonia compared to its peak in 2008. Furthermore, in Lithuania, REER depreciation lasted longer.

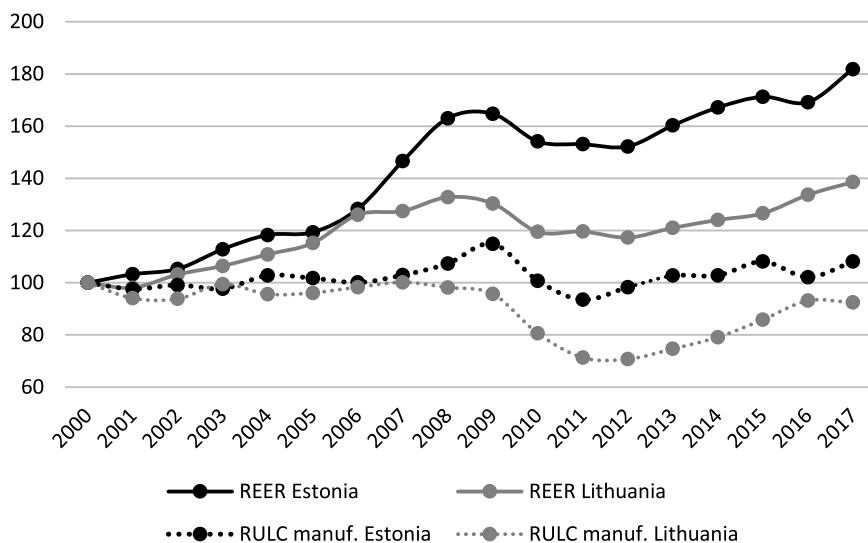


Figure 2. Index (2000 = 100) of REER and manufacturing RULC.

Another measure of price competitiveness, more directly related to wage costs, is real unit labour costs (RULC). I use manufacturing RULC as a proxy for the tradable sector. While during the previous debt-led GMs both countries managed to sustain stable RULC, during 2009–2011, only Lithuania achieved significant and durable improvements in a range of around 30% and lasting throughout the subsequent period of export-led growth (Figure 2). In contrast, in Estonia, if the 2009 peak is not taken into consideration as it was possibly related to a delayed reaction of the labour market to the contraction of output, 2011 saw only slight improvement, which diminished the following year.

This is further supported by the dynamics of the wage share. Estonia recovered from the GFC with a higher average wage share than it had before (Figure 3). In contrast, in 2009–2011 Lithuania experienced a decrease in its wage share by around 6 p.p. in the total economy and by more than 10 p.p. in manufacturing. Thus, the wage share in manufacturing became lower than in the total economy, implying a higher profitability for this sector, which is consistent with the data in Table 3. This stands in stark contrast to Estonia, where wage share in manufacturing has persistently been higher than in the total economy, a trend more common in other EU countries as well.

3.3 One adjustment strategy, two growth strategies

Now I investigate the political drivers of GM change in Estonia and Lithuania, starting with government policies. I distinguish between two policy layers: fiscal and economic policies aimed at macroeconomic stabilization in times of crises, and policies aimed at economic recovery and growth. I will refer to these policy layers as the ‘adjustment strategy’ and the ‘growth strategy’.

At the onset of the GFC, the Estonian and Lithuanian governments, faced with accumulating negative effects on consumption, production and total output, as well as increasing fiscal and employment strains, adopted policy mixes of internal devaluation as their core

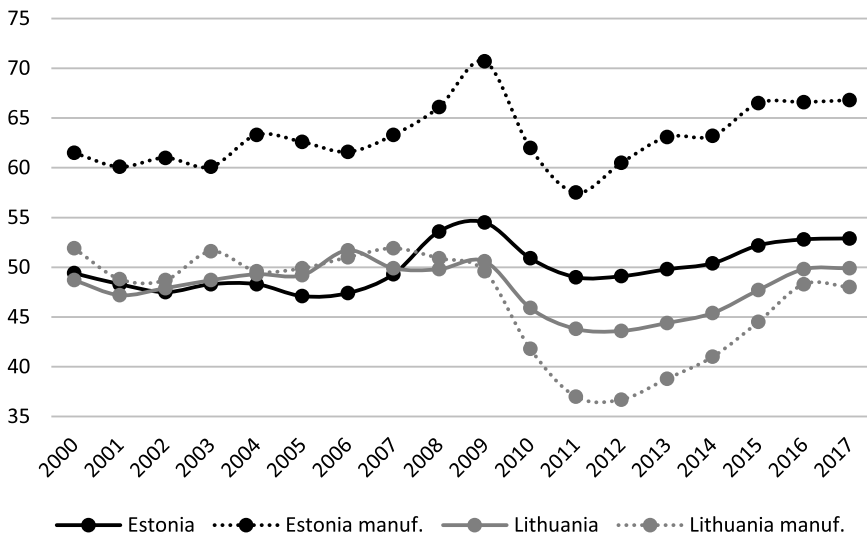


Figure 3. Adjusted wage share.

crisis response strategies. This choice was consistent with [Walter's \(2016\)](#) explanation of how governments choose between internal and external devaluation-based adjustment strategies. As both countries were characterized by high levels of foreign-currency-denominated debt in the private sector, heavy reliance on imports and flexible labour markets, their potential economic costs of internal devaluation were lower, as it threatened to hurt the macroeconomic stability least. The political costs of internal devaluation were also lower as the centre-right coalitions that controlled the cabinets during the GFC should have sought to minimize the hurt caused to their urban middle-class voters.

The internal devaluation-based policy mixes adopted in Estonia and Lithuania comprised measures of fiscal consolidation on both the expenditure and revenue sides, and to a large extent were similar between the countries ([Purfield and Rosenberg, 2010](#); [Nakrošis et al., 2015](#)). The expenditure-side measures mainly consisted of wage and employment cuts in the public sector, cuts in social programmes and old-age pensions and reductions in contributions to second-pillar private pension funds. The revenue-side measures comprised tax increases including the VAT, social security contributions, excises and pollution fees and some one-off revenue-generation measures such as extra dividends from state-owned enterprises. In addition, corporate income tax was increased (later reverted) and personal income tax reduced in Lithuania. The total effect of both expenditure and revenue measures was also quite similar between the countries, though slightly larger in Estonia than Lithuania, and during 2008–2010 amounted to 13.8% and 11.7% of GDP, respectively ([Kattel and Raudla, 2013](#)).

However, similar choices of adjustment strategies as well as their largely similar implementation and effects do not imply that growth strategies cannot differ from country to country. Governments having different political visions of economic recovery and growth may choose different combinations of internal devaluation policies such as those aiming at fiscal adjustment, financial stability, wage restraint or repairing corporate and household

balance sheets (Walter, 2016). But they also may adopt additional policies based on the political, institutional and sectoral opportunities and constraints they face.

Seeing the GFC adjustment phase in Estonia and Lithuania through this lens reveals that indeed, although the countries adopted largely similar internal devaluation-based adjustment strategies, different political visions of recovery and growth were associated with them. While pro-European political elites in both countries saw joining the Euro Area as a necessary step forward towards deeper European integration and Westernization, it was Estonia that made the euro the primary goal of its internal devaluation strategy (Staeher, 2013). This goal was backed both by favourable economic and fiscal conditions and a strong ideological and political stance. During the pre-crisis debt-led GM, Estonia kept its budget in surplus but higher inflation prevented it from entering the EMU. The crisis reduced inflation thus creating a new window of opportunity. To use it, the fiscal deficit limit of 3% became the main focal point for fiscal consolidation policies (Raudla and Kattel, 2011). While these policies meant stronger austerity-inflicted pain on the society, they were backed by beliefs that maintaining the currency peg and fiscal discipline, and introducing the euro would distinguish Estonia from other CEE countries in the eyes of foreign investors and thus compensate for the painful measures (Raudla and Kattel, 2011; Kattel and Raudla, 2013).

In contrast, in Lithuania, joining the EMU was less politically salient due to unsuccessful inflation-related attempts in 2007; the government expected to meet the criteria only in 2012 (Government of Lithuania, 2010). Instead, the government placed repairing corporate balance sheets and improving the competitiveness of domestic enterprises at the centre of its growth strategy. Thus, in addition to the fiscal consolidation plan, the economic recovery plan with a stimulus package worth 5% of GDP was approved (Government of Lithuania, 2010). The plan targeted the enterprise sector in general and the manufacturing and construction sectors in particular. It explicitly stated that the goal of the government was not to follow other European countries in short-term stimulation of domestic demand but rather to lay the foundations for long-term competitiveness and growth (National Audit Office in Lithuania, 2010).

From this account of the adjustment and growth strategies in Estonia and Lithuania, it follows that the adoption of two different variants of export-led GMs based on different sectoral loci of growth in the two countries was underpinned by similar internal devaluation-based strategies of economic adjustment serving different strategies of economic growth. In the next section, I explore political underpinnings of these growth strategies.

3.4 Social bloc politics

In both Estonia and Lithuania, the pre-GFC period of debt-led growth received broad socio-political support and was therefore backed by broadly based social blocs. Freshly granted membership to the EU and strong ideological attitudes towards further Westernization and European integration played a key role in expanding this base (Lust, 2010; Talts, 2013). Favourable economic conditions, however, were also important. As private credit was mainly directed to housing mortgages and real-estate financing, the structural importance of the construction and finance sectors increased, while the importance of manufacturing and exports decreased (Brixiova et al., 2010; Staeher, 2015). This was reflected in the faster growth of construction wages compared to manufacturing wages and

slower exports growth in comparison with domestic demand growth (IMF, 2010b). It also suggests that in sectoral terms, the alliances of banking, construction, real estate and other domestically oriented sectors were at the core of both countries' social blocs that underpinned their debt-led GMs. While socio-economically, this core was comprised of the classes of urban professionals, who enjoyed largest wage increases and easiest access to credits. Yet, a range of other socio-economic groups could be considered a part of the social blocs as well as they also benefited from fast income growth, better opportunities to consume, higher availability of jobs and more generous social provisions (Lazutka and Povilūnas, 2010; Navickė, 2020).

During and after the GFC, both countries' social bloc dynamics closely corresponded to the adjustment and growth strategies followed by the governments. While the Estonian social bloc saw continuity, major changes occurred in the Lithuanian social bloc. As already noted previously, preserving the interests of urban middle classes, which bore the largest share of foreign-currency denominated loans, was at the core of the choices of the internal devaluation-based adjustment strategies of the centre-right governments at the time. Thus, the positions of these groups in the social blocs did not change. Yet, the largest divergences between the countries came from different dynamics in the positions of the foreign-owned banking and domestically owned construction and manufacturing sectors.

Although the banking sectors were at the core of both countries' debt-led GMs, the governments had different preferences towards preserving their interests during the GFC. These preferences closely followed the degree to which the banking sector was embedded in the society and politics during the earlier debt-led GM. In Estonia, the banking sector had played a highly prominent and complex role, so its position in the social bloc remained continuously strong. From the early to mid-2000s investment by Nordic banks comprised a major share of the Estonian inward FDI stock, which at that time was already among the largest in the EU (OECD, 2023a). Importantly, Nordic banks were not only a source of finance but also a major source of technological spill-overs through the establishment of R&D hubs for digitalization of financial services (Kalvet, 2007). This, coupled with a strong government's priority for e-government initiatives, resulted in a deep, largely informally based, public-private partnership in designing and implementing nation-wide ICT literacy programmes and building a digital ID system, which further played a key role in the mass digitalization of local and central government services (Kattel and Mergel, 2019).

In contrast, the position of the banking sector became more vulnerable in Lithuania where banks, also mainly foreign-owned, played a more traditional role limited to financing the economy and consumption. As a result, their embeddedness in the society was lower, informal ties with political elites weaker and the reputation more fragile. Although saving the financial system from a crash is a top priority for any government, in Lithuania, the sentiment of blaming the foreign-owned banks for causing the crisis was noticeable (e.g. Alfa.lt 2010b). This sentiment started during the GFC and continued long after resulting in an official investigation in 2017 of the role foreign-owned banks played in increasing the share of foreign-currency-denominated loans prior to the GFC and the borrowing costs of the government during it (Seimas, 2017) and in the introduction of an above-standard tax on bank profits in 2020 and an additional windfall tax in 2023.

Dynamics in the Lithuanian social bloc, therefore, were different from those in Estonia. This is evident from politics behind the choice and implementation of the recovery and growth strategy during the GFC and in the aftermath. To account for these dynamics, I rely

extensively on media publications from that time. From the onset of the GFC, the newly elected Conservative and Liberal coalition Government, as well as the newly elected President, had negative attitudes towards the pre-GFC GM, which they saw as driven by excessive borrowing, fiscal spending and consumption, and thus responsible for the crisis (Bernardinai.lt 2009; Delfi.lt 2011a). These negative attitudes were the primary motivation for the economic recovery plan already presented earlier that underpinned the growth strategy successively followed by Lithuania.

Approved in the early 2009 after the intensive consultations with business associations and numerous amendments resulting from this (Government of Lithuania 2009), the plan received broad socio-political support (Alfa.lt 2009) and was targeted at the recovery of enterprises via supply-side capacity building (National Audit Office in Lithuania, 2010). Of the five parts of the plan, three comprised measures aimed at easing business access to finance, improving the quality of business regulation, and better absorption of EU funds, while two parts explicitly targeted the manufacturing and construction sectors with measures aimed support for exports and a mass renovation programme of Soviet-era apartment buildings.

Nevertheless, the implementation of the plan was not smooth. The quality of business regulation part of the plan was stuck in the bureaucratic resistance, improvements in business access to finance took longer than expected, while the renovation programme was impeded by slow financing for which, again, the foreign-owned banks were blamed for (Lrytas.lt, 2009; National Audit Office in Lithuania, 2010; Vz.lt, 2011; Delfi.lt, 2011b). Yet, the plan was still successful at providing the financial, administrative and diplomatic support to enterprises to improve their export capacities. This was acknowledged by the minister of the economy himself, who saw the export promotion part of the plan as the most successful (Alfa.lt, 2010a).

The limited success of the plan led to the fragmentation of the business support, which was further deepened by parallel government attempts to increase the effectiveness and transparency of the public procurement and the distribution of the EU funds. These attempts hurt interests of certain domestic business groups in the sheltered sector and provoked public attacks against the government consequently leading to the resignation of the minister of the economy (15min.lt, 2011; Sekunde.lt, 2011). Importantly, this also opened a divide in the government's attitudes between 'bad oligarchic' business in the sheltered sector and 'good' business in the tradable sector. Thus, naturally, even if not intended solely from the beginning, manufacturing business in the tradable sector was the largest winner of the economic recovery plan. As exports consequently became the much-praised locomotive of the post-GFC recovery and subsequent growth, the position of the tradable sector at the core of the post-GFC social bloc was secured.

Consequently, the resulting Lithuanian domestic business-based social bloc, following its sectoral cost competitiveness requirements, had stronger motivation to use the opportunity brought by the GFC for greater wage restraint. This became a policy priority consistent with the country's low-quality manufacturing- and services-based sectoral composition, and the government's growth strategy targeting competitiveness improvements of exports. It also gained favour with wage-setting institutions. While high wage flexibility characterized wage-setting institutions in both countries (Dabušinskas and Rõõm, 2011; Pesliakaitė and Šiaudvytis, 2015), it was Lithuania but not Estonia that used this flexibility to an unprecedented extent (see subsection 3.2 for effects on competitiveness), mainly through the

public and private sector wage cuts and personal income tax reduction. Thus, from its peak in the second half of 2008, in just one year average hourly private sector labour costs decreased, as the *IMF (2010a)* noted, by ‘simply exceptional’ 12%—twice as high if compared with around 6% in Estonia.

4. Conclusion

The article proposes a framework of GM change in emerging economies that links GM change to the interplay between political dynamics and historically shaped sectoral structures. While politics is seen as an active driver of change, the sectoral structure is a path-dependent historical condition that sets limits on the range of available GMs and determines the capacity of a new GM to generate growth.

The framework builds on three components. First, it employs the notion of sectoral loci of growth comprised of key sectors of the economy and underlying institutions. This notion helps to identify important differences between export-led GMs adopted in emerging and advanced economies that go beyond their simple export orientation. If an emerging economy adopts an export-led GM, it is more likely to be driven by exports of low-quality manufacturing and services, in contrast to high-quality manufacturing or dynamic services in an advanced economy. Thus, the notion of sectoral loci of growth proposes a way to integrate PKE’s GM analysis with a CPE’s need for a higher differentiation of GMs.

Second, the article argues that in emerging economies, politics is not a fully independent variable of GM change, as some earlier studies both in PKE and CPE have argued, but has its roots in long-term sectoral dynamics. While political dynamics are essential for a GM change to occur, this change is also to a large extent determined by the sectoral structures existing in a country at the moment of the change. Importantly, during the previous GM incarnation these sectoral structures could undergo sizeable transformations, which can have significant effects on the sectoral potential for growth of the successive GM, but which also affect the composition of the new social bloc and the choice of the growth strategy to be followed. Third, specifically for the purpose of analysing emerging economies and taking into account high political volatility, low interest group organizational capacities and high informality, the article proposes an informal network-based view of social blocs.

The article illustrates the framework with an empirical case study of two DMEs, Estonia and Lithuania. As in many other emerging economies, in these two countries the GFC exhausted debt-led private demand boom GMs, thus creating the political necessity of finding new ways to resume growth. While both countries followed internal devaluation-based adjustment strategies, they both recovered from the GFC by adopting different variants of export-led GMs: weakly export-led in Estonia and export-led mercantilist in Lithuania. Examination of the sectoral loci of growth at the core of these two export-led GMs reveals further differences between them. While low-quality manufacturing and services were at the core of the Lithuanian export-led GM, which can be considered as more common for emerging economies in general, dynamic services became the core sectoral locus of growth of the Estonian GM.

The article links these GM differences between Estonia and Lithuania to political differences during the GFC, which in turn were shaped to a large extent by historically accumulated differences in sectoral structures. While in the Estonian economy, in terms of both its size and profit generating capability, dynamic services expanded owing to a contraction of

low-quality manufacturing and services, the Lithuanian economy saw a largely opposite trend. These sectoral changes had an impact on politics when it became necessary to find new sources of growth. Transnational actors from the financial sector retained their strong position vis-à-vis domestic business in Estonia, therefore largely the same social bloc of the debt-led GM underpinned a post-GFC export-led GM. In contrast, the Lithuanian social bloc experienced a sharp transformation: domestic tradable business gained more power at the expense of transnational actors from the banking sector.

These sectoral and political differences were reflected in the different growth strategies followed by the governments. While both Estonia and Lithuania adopted similar internal devaluation-based crisis-adjustment paths, these paths served different socio-political expectations about available sources of growth. The main growth strategy followed by the Estonian government was aimed at meeting the Maastricht criteria for euro adoption, restoring the confidence of the financial markets and foreign investors, and returning to the previous GM. The Lithuanian government followed a different strategy with a focus on fixing balance sheets and improving the competitiveness of domestic firms. Therefore, in addition to fiscal consolidation, the strategy comprised measures aimed at deeper devaluation of wages as well as the promotion of domestic entrepreneurial activity and exports.

A study of emerging economies is inevitably a study of development, thus the integration of GM analysis into CPE proposed in the article can be valuable for development-related inquiries, especially when it comes to accounting for differences in seemingly similar development paths. The cases of Estonia and Lithuania are good examples. While both experienced similar post-communist transformations and economic restructuring, the GM analysis shows that, as a result of recent GM changes, the two countries have set themselves on diverging paths of socio-economic development. Contrary to what the government expected at the onset of the GFC, Estonia did not return to the previous extent of debt-led growth due to the persistently low accessibility to credits. However, after the GFC, its recovery resembled in many respects a subsequent developmental stage of the same GM, capable of combining demand from exports and domestic consumption due to its increasing specialization in dynamic services and lower dependency on wage restraint. Lithuania experienced a more radical change. It built a strong capacity to export domestically produced low-quality manufactured goods and services. This capacity largely rested on the capacity for wage restraint, which was deeply politically and institutionally rooted. Therefore, the Lithuanian economy has become more internal devaluation-dependent.

Funding

This research has received funding from [European Social Fund](#) (project No 09.3.3-LMT-K-712-19-0179) under grant agreement with the Research Council of Lithuania (LMTLT).

Acknowledgements

I am grateful to Vytautas Kuokštis and Simonas Algirdas Spurga for valuable comments on the earlier version of the article and the two anonymous reviewers whose comments helped to improve the article substantively.

References

- 15min.lt. (2011) 'Paaiškėjo, Kas Slypi Ministro Dainiaus Kreivio Pažymoje', accessed at <https://www.15min.lt/naujiena/aktualu/lietuva/paaiskejo-kas-slypi-ministro-dainiaus-kreivio-pazymoje-56-140240> on January 7, 2024.
- Akçay, A. Ü. and Jungmann, B. (2022) *Political Economy of Growth Regimes in Poland and Turkey*. Berlin: Institute for International Political Economy.
- Akçay, Ü., Hein, E. and Jungmann, B. (2022) 'Financialisation and Macroeconomic Regimes in Emerging Capitalist Economies before and after the Great Recession', *International Journal of Political Economy*, 51, 77–100.
- Alfa.lt (2009) 'Verslą Peni tik Gražūs Pažadai', accessed at <https://www.alfa.lt/straipsnis/10290324/versla-peni-tik-grazus-pazadai/> on January 7, 2024.
- Alfa.lt (2010a) 'Kreivys: Kainos Gali Augti', accessed at <https://www.alfa.lt/straipsnis/10426997/kreivys-kainos-gali-augti/> on January 7, 2024.
- Alfa.lt (2010b) 'Lietuva—ant Skandinavų Bankų Aukuro', accessed at <https://www.alfa.lt/straipsnis/10398166/lietuva-ant-skandinavu-banku-aukuro/> on January 7, 2024.
- Amable, B. (2017) *Structural Crisis and Institutional Change in Modern Capitalism: French Capitalism in Transition*. Oxford: Oxford University Press.
- Amable, B. (2022) *Nothing New under the Sun: The so-Called 'Growth Model Perspective'*. Berlin: Institute for International Political Economy.
- Amable, B. and Palombarini, S. (2008) 'A Neorealist Approach to Institutional Change and the Diversity of Capitalism', *Socio-Economic Review*, 7, 123–143.
- AMECO database. (2023a) 'Exports and Imports of Goods and Services (Indicators)', accessed at https://economy-finance.ec.europa.eu/economic-research-and-databases/economic-databases/ameco-database_en#database on March 31, 2023.
- AMECO database. (2023b) 'Gross Domestic Product (Indicators)', accessed at https://economy-finance.ec.europa.eu/economic-research-and-databases/economic-databases/ameco-database_en#database on March 31, 2023.
- Avlijaš, S., Hassel, A. and Palier, B. (2021) 'Growth Strategies and Welfare Reforms in Europe'. In Hassel, A. and Palier, B. (eds) *Growth and Welfare in Advanced Capitalist Economies*. Oxford: Oxford University Press, pp. 372–436.
- Baccaro, L. and Pontusson, J. (2019) *Social Blocs and Growth Models: An Analytical Framework with Germany and Sweden as Illustrative Cases*. Unequal Democracies Working Paper N° 7. Geneva: University of Geneva.
- Baccaro, L. and Pontusson, J. (2022) 'The Politics of Growth Models', *Review of Keynesian Economics*, 10, 204–221.
- Ban, C. and Adascalitei, D. (2022) 'The FDI-Led Growth Regimes of the East-Central and the South-East European Periphery'. In Blyth, M., Baccaro, L. and Pontusson, J. (eds) *Diminishing Returns: The New Politics of Growth and Stagnation*. Oxford: Oxford University Press, pp. 189–209.
- Behringer, J. and van Treeck, T. (2022) 'Varieties of Capitalism and Growth Regimes: The Role of Income Distribution', *Socio-Economic Review*, 20, 1249–1286.
- Beramendi, P., Hausermann, S., Kitschelt, H. and Kriesi, H. (2015) *The Politics of Advanced Capitalism*. Cambridge: Cambridge University Press.
- Bernardinai.lt. (2009) 'Ekspertai: Lietuvos Ekonominė Krizė Tarsi Pagirios', accessed at <https://www.bernardinai.lt/2009-11-07-ekspertai-lietuvos-ekonomine-krize-tarsi-pagirios/> on January 7, 2024.
- Bohle, D. (2018) 'European Integration, Capitalist Diversity and Crises Trajectories on Europe's Eastern Periphery', *New Political Economy*, 23, 239–253.
- Bohle, D. and Greskovits, B. (2012) *Capitalist Diversity on Europe's Periphery*. Ithaca, NY: Cornell University Press.

- Bohle, D. and Regan, A. (2021) 'The Comparative Political Economy of Growth Models: Explaining the Continuity of FDI-Led Growth in Ireland and Hungary', *Politics & Society*, 49, 75–106.
- Brixiova, Z., Vartia, L. and Wörgötter, A. (2010) 'Capital Flows and the Boom-Bust Cycle: The Case of Estonia', *Economic Systems*, 34, 55–72.
- Dabušinskas, A. and Rõõm, T. (2011) *Survey Evidence on Wage and Price Setting in Estonia*. Bank of Estonia Working Paper Series, Working Paper Series 6/2011, Tallinn, Bank of Estonia.
- De Ville, F. and Vermeiren, M. (2014) 'The Eurozone Crisis and the Rise of China in the Global Monetary and Trading System: The Political Economy of an Asymmetric Shock', *Comparative European Politics*, 14, 572–603.
- Delfi.lt (2011a) 'D. Kreivys. Dar Neskolinim Graikijai Krizių Premjero', accessed at <https://www.delfi.lt/news/ringas/politics/dkreivys-dar-neskolinkim-graikijai-kriziu-premjero.d?id=50463448> on January 7, 2024.
- Delfi.lt (2011b) 'Ka šaliai Davė Ekonomikos Skatinimo Plano Milijardai', accessed at <https://www.delfi.lt/verslas/verslas/ka-saliai-dave-ekonomikos-skatinimo-plano-milijardai-40468785> on January 7, 2024.
- Detzer, D. (2018) 'Inequality, Emulation and Debt: The Occurrence of Different Growth Regimes in the Age of Financialization in a Stock-Flow Consistent Model', *Journal of Post Keynesian Economics*, 41, 284–315.
- Dodig, N., Hein, E. and Detzer, D. (2016) 'Financialisation and the Financial and Economic Crises: Theoretical Framework and Empirical Analysis for 15 Countries'. In Hein, E., Detzer, D. and Dodig, N. (eds) *Financialisation and the Financial and Economic Crises: Country Studies*. Northampton: Edward Elgar, pp. 1–41.
- Doner, R. F. and Schneider, B. R. (2016) 'The Middle-Income Trap: More Politics than Economics', *World Politics*, 68, 608–644.
- Dühaupt, P. and Hein, E. (2019) 'Financialization, Distribution, and Macroeconomic Regimes before and after the Crisis: A post-Keynesian View on Denmark, Estonia, and Latvia', *Journal of Baltic Studies*, 50, 435–465.
- Government of Lithuania. (2009) 'Po Diskusijų su Verslu Vyriausybėje Tvirtinamas Ekonomikos Skatinimo Planas', accessed at <https://eimin.lrv.lt/lt/naujienos/po-diskusiju-su-verslu-vyriausybeje-tvirtinamas-ekonomikos-skatinimo-planas> on January 7, 2024.
- Government of Lithuania (2010) *Lietuvos Respublikos Vyriausybės 2009 Metų Veiklos Ataskaita*. Vilnius.
- Haffert, L. and Mertens, D. (2021) 'Between Distribution and Allocation: Growth Models, Sectoral Coalitions and the Politics of Taxation Revisited', *Socio-Economic Review*, 19, 487–510.
- Hall, P. A. (2021) 'How Growth Strategies Evolve in the Developed Democracies'. In Hassel, A. and Palier, B. (eds) *Growth and Welfare in Advanced Capitalist Economies*. Oxford: Oxford University Press, pp. 57–97.
- Hall, P. A. and Soskice, D. (2001) *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*. Oxford: Oxford University Press.
- Hancké, B. (2002) 'The Political Economy of Wage-Setting in the Eurozone'. In Pochet, P. (ed) *Wage Policy in the Eurozone*. Brussels: Peter Lang Publishing, pp. 131–148.
- Hassel, A. and Palier, B. (eds) (2021a) *Growth and Welfare in Advanced Capitalist Economies*. Oxford: Oxford University Press.
- Hassel, A. and Palier, B. (2021b) 'Tracking the Transformation of Growth Regimes in Advanced Capitalist Economies'. In Hassel, A. and Palier, B. (eds) *Growth and Welfare in Advanced Capitalist Economies*. Oxford: Oxford University Press, pp. 3–56.

- Hein, E. (2019) 'Financialisation and Tendencies towards Stagnation: The Role of Macroeconomic Regime Changes in the Course of and after the Financial and Economic Crisis 2007-09', *Cambridge Journal of Economics*, **43**, 975–999.
- Hein, E. and Martschin, J. (2021) 'Demand and Growth Regimes in Finance-Dominated Capitalism and the Role of the Macroeconomic Policy Regime: A post-Keynesian Comparative Study on France, Germany, Italy and Spain before and after the Great Financial Crisis and the Great Recession', *Review of Evolutionary Political Economy*, **2**: 493–527.
- Hein, E., Meloni, W. P. and Tridico, P. (2020) 'Welfare Models and Demand-Led Growth Regimes before and after the Financial and Economic Crisis', *Review of International Political Economy*, **0**: 1–36.
- IMF. (2009a) *Republic of Estonia: Financial System Stability Assessment*. Washington, DC: IMF.
- IMF. (2009b) *Republic of Lithuania: Staff Report for the 2009 Article IV Consultation*. Washington, DC: IMF.
- IMF. (2010a) *Does Lithuania have a Competitiveness Problem?* Lithuania, Selected Issues Paper, Washington, DC: IMF.
- IMF. (2010b) *The Credit Boom in the EU New Member States: Bad Luck or Bad Policies?* IMF Working Papers, Washington, DC: IMF.
- Iversen, T. and Soskice, D. (2013) 'An structural-institutional explanation of the Eurozone crisis', *Paper Presented at the Political Economy Workshop at the London School of Economics*. *Unpublished manuscript*.
- Jahn, D. (2016) 'Changing of the Guard: Trends in Corporatist Arrangements in 42 Highly Industrialized Societies from 1960 to 2010', *Socio-Economic Review*, **14**, 47–71.
- Jastramskis, M., Kuokštis, V. and Baltrukevičius, M. (2021) 'Retrospective Voting in Central and Eastern Europe: Hyper-Accountability, Corruption or Socio-Economic Inequality? ', *Party Politics*, **27**, 667–679.
- Jungmann, B. (2023) 'Growth Drivers in Emerging Capitalist Economies: Building Blocks for a post-Keynesian Analysis and an Empirical Exploration of the Years before and after the Global Financial Crisis', *Review of Evolutionary Political Economy*, **4**, Springer International Publishing: 349–386.
- Kalanta, M. (2023) 'Middle-Income Trap and the Baltic States: Common Challenges, Different Strategies', *Politologija*, **110**, 8–47.
- Kalvet, T. (2007) *The Estonian Information Society Developments Since the 1990s*. PRAXIS Working Paper. Tallinn: PRAXIS.
- Kattel, R. and Mergel, I. (2019) 'Estonia's Digital Transformation: Mission Mystique and the Hiding Hand'. In Compton, M. and Hart, P. (eds) *Great Policy Successes: How Governments Get It Right in a Big Way at Least Some of the Time*. IIPP WP 2018-09. Oxford: Oxford University Press, pp. 143–160.
- Kattel, R. and Raudla, R. (2013) 'The Baltic Republics and the Crisis of 2008–2011', *Europe-Asia Studies*, **65**, 426–449.
- Kharas, H. and Kohli, H. (2011) 'What is the Middle Income Trap, Why Do Countries Fall into It, and How Can It Be Avoided', *Global Journal of Emerging Market Economies*, **3**, 281–289.
- Kohler, K. and Stockhammer, E. (2022) 'Growing Differently? Financial Cycles, Austerity, and Competitiveness in Growth Models since the Global Financial Crisis', *Review of International Political Economy*, **29**, 1314–1341.
- Kohler, K., Tippet, B. and Stockhammer, E. (2023) 'House Price Cycles, Housing Systems, and Growth Models', *European Journal of Economics and Economic Policies: Intervention*, **20**, 461–490. <https://doi.org/10.4337/ejeep.2023.0121>.
- Kuokštis, V. and Vilpišauskas, R. (2010) Economic Adjustment to the Crisis in the Baltic States in Comparative Perspective. *7th Pan-European International Relations Conference*: 1–28.

- Lavoie, M. and Stockhammer, E. (2013) 'Wage-Led Growth: Concept, Theories and Policies'. In Lavoie, M. and Stockhammer, E. (eds) *Wage-Led Growth: An Equitable Strategy for Economic*. London: Palgrave Macmillan and the International Labour Office, pp. 13–39.
- Lazutka, R. and Povilūnas, A. (2010) *Lithuania. In-Work Poverty and Labour Market Segmentation in the EU*. Brussels, Luxembourg: European Commission.
- Lrytas.lt (2009) 'D. Kreivys: Skatinimo Planas Veikia, Kai Kurios Priemonės Stringa dėl Bankų ir Europos Institucijų Kaltės', accessed at <https://www.lrytas.lt/verslas/rinkos-pulsas/2009/11/10/news/d-kreivys-skatinimo-planas-veikia-kai-kurios-priemones-stringa-del-banku-ir-europos-instituciju-kaltes—5753379> on January 7, 2024.
- Lust, A. (2010) *Familiarity Breeds Contempt: Strategies of Economic Reform and Popular Attitudes towards European Integration in Lithuania and Estonia*. Ithaca, NY: Cornell University.
- Meardi, G. (2007) 'More Voice after More Exit? Unstable Industrial Relations in Central and Eastern Europe', *Industrial Relations Journal*, 38, 503–523.
- Mertens, D., Nölke, A., May, C., Schedelik, M., ten Brink, T. and Gomes, A. (2022) *Moving the Center: Adapting the Toolbox of Growth Model Research to Emerging Capitalist Economies*. Berlin: Institute for International Political Economy.
- Nakrošis, V., Vilpišauskas, R. and Kuokštis, V. (2015) 'Fiscal Consolidation and Structural Reforms in Lithuania in the Period 2008–2012: From Grand Ambitions to Hectic Firefighting', *International Review of Administrative Sciences*, 81, 522–540.
- National Audit Office in Lithuania. (2010) *Valstybinio Audito Ataskaita. Smulkiojo ir Vidutinio Verslo Plėtra*. Vilnius, Lithuania: National Audit Office in Lithuania.
- Navickė, J. (2020) 'Factors behind the Changes in Income Distribution in the Baltics: Income, Policy, Demography', *Journal of Baltic Studies*, 51, 137–157.
- Nölke, A. (2019) 'Dependent versus State-Permeated Capitalism: Two Basic Options for Emerging Markets', *International Journal of Management and Economics*, 54, 269–282.
- Nölke, A. and Vliegenthart, A. (2009) 'Enlarging the Varieties of Capitalism: The Emergence of Dependent Market Economies in East Central Europe', *World Politics*, 61, 670–702.
- OECD. (2023a) *FDI Stocsk (Indicator)*. Paris, France: OECD.
- OECD. (2023b) *Housing Prices (Indicator)*. Paris, France: OECD.
- Pešliakaitė, J. and Šiaudvytis, T. (2015) *Wage and Price Setting Behaviour of Lithuanian Firms: Survey-Based Evidence for 2008–2009 and 2010–2013*. Bank of Lithuania Occasional Paper Series. 8, Vilnius, Bank of Lithuania.
- Picot, G. (2021) 'Cross-National Variation in Growth Models'. In Hassel, A. and Palier, B. (eds) *Growth and Welfare in Advanced Capitalist Economies*. Oxford: Oxford University Press, pp. 135–160.
- Purfield, C. and Rosenberg, C. B. (2010) *Adjustment under a Currency Peg: Estonia, Latvia and Lithuania during the Global Financial Crisis 2008–09*. IMF Working Paper WP/10/213, Washington, DC: IMF.
- Raudla, R. and Kattel, R. (2011) 'Why Did Estonia Choose Fiscal Retrenchment after the 2008 Crisis', *Journal of Public Policy*, 31, 163–186.
- Rodrik, D. (2015) *Premature Deindustrialization*. NBER Working Paper Series. 20935, Cambridge, NBER.
- Rothstein, S. A. (2021) 'Toward a Discursive Approach to Growth Models: Social Blocs in the Politics of Digital Transformation', *Review of International Political Economy*, 29, 1211–1236.
- Schedelik, M., Nölke, A., Mertens, D. and May C. (2021) 'Comparative Capitalism, Growth Models and Emerging Markets: The Development of the Field', *New Political Economy*, 26, 514–526.
- Schwartz, H. M. and Tranøy, B. S. (2019) 'Thinking about Thinking about Comparative Political Economy: From Macro to Micro and Back', *Politics & Society*, 47, 23–54.

- Seawright, J., and Gerring, J. (2008) 'Case Selection Techniques in Case Study Research', *Political Research Quarterly*, 612, 294–308.
- Sekunde.lt (2011) 'Puolimas Prieš D. Kreiviô Buvo Surežisuotas', accessed at https://sekunde.lt/leidinys/old_turinys/puolimas-pries-d-kreivi-buvo-surezisuotas/ on January 7, 2024.
- Seimas, L. R. (2017) 'Nutarimas dėl Lietuvos Respublikos Seimo Laikinosios Tyrimo Komisijos Igaliojimų Suteikimo Lietuvos Respublikos Seimo Biudžeto ir Finansų Komitetui ir Pavedimo Atlikti Parlamentiniô Tyrimà dël Galimai Padarytos Didelio Masto Zalos Valstybei 2009–2012 Metai', Lithuania, accessed at <https://e-seimas.lrs.lt/portal/legalAct/lt/TAP/c25403f0b4ac11e7b2ae99faa58060a3?jfwid=-11615j5s55>.
- Staehr, K. (2013) 'Austerity in the Baltic States during the Global Financial Crisis', *Intereconomics*, 48, 293–302.
- Staehr, K. (2015) 'Exchange Rate Policies in the Baltic States: From Extreme Inflation to Euro Membership', *CESifo Forum*, 4, 9–18.
- Stockhammer, E. (2015) 'Rising Inequality as a Cause of the Present Crisis', *Cambridge Journal of Economics*, 39, 935–958.
- Stockhammer, E. (2022) 'Post-Keynesian Macroeconomic Foundations for Comparative Political Economy', *Politics & Society*, 50, 156–187.
- Stockhammer, E. and Otero, A. N. (2023) 'A Tale of Housing Cycles and Fiscal Policy, Not Competitiveness. Growth Drivers in Southern Europe', *New Political Economy*, 28, 483–505.
- Talts, M. (2013) 'Some Aspects of the Baltic Countries' Pre- and Post- Accession Convergence to the European Union', *BJES*, 3, 58–83.
- Vandor, P., Traxler, N., Millner, R. and Meyer, M. (2017) *Civil Society in Central and Eastern Europe: Challenges and Opportunities*. Vienna: ERSTE Foundation.
- Vz.lt. (2011) 'Apdulkêje Vyriausybës Pažadai', accessed at https://www.vz.lt/archive/blog/2011/7/26/apdulkêje_vyriausybës_pažadai on January 7, 2024.
- Wade, R. (2010) 'After the Crisis: Industrial Policy and the Developmental State in Low-Income Countries', *Global Policy*, 1, 150–161.
- Walter, S. (2016) 'Crisis Politics in Europe: Why Austerity is Easier to Implement in Some Countries than in Others', *Comparative Political Studies*, 49, 841–873.
- Whittaker, D. H., Sturgeon, T. J., Okita, T. and Zhu, T. (2020) *Compressed Development: Time and Timing in Economic and Social Development*. Oxford: Oxford University Press.

Appendix

Appendix 1. Activities included in the 'Low and medium-low technology (LMLT) manufacturing', 'High and medium-high technology (HMHT) manufacturing' and 'Dynamic services' aggregates

LMLT manufacturing (NACE Rev. 2.2-digit level)

- Manufacture of coke and refined petroleum products (19)
- Manufacture of rubber and plastic products (22)
- Manufacture of other non-metallic mineral products (23)
- Manufacture of basic metals (24)
- Manufacture of fabricated metal products, except machinery and equipment (25)
- Repair and installation of machinery and equipment (33)
- Manufacture of food products (10), beverages (11) and tobacco products (12)
- Manufacture of textiles (13) and wearing apparel (14)
- Manufacture of leather and related products (15)
- Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials (16)
- Manufacture of paper and paper products (17)
- Printing and reproduction of recorded media (18)
- Manufacture of furniture (31) and other manufacturing (32)

HMHT manufacturing (NACE Rev. 2.2-digit level)

- Manufacture of basic pharmaceutical products and pharmaceutical preparations (21)
- Manufacture of computer, electronic and optical products (26)
- Manufacture of chemicals and chemical products (20)
- Manufacture of electrical equipment (27)
- Manufacture of machinery and equipment n.e.c. (28)
- Manufacture of motor vehicles, trailers and semi-trailers (29)
- Manufacture of other transport equipment (30)

Dynamic services (NACE Rev. 2.2-digit level)

- Motion picture, video and television programme production, sound recording and music publishing activities (59)
 - Programming and broadcasting activities (60) and telecommunications (61)
 - Computer programming, consultancy and related activities (62) and information service activities (63)
 - Scientific research and development (72)
 - Water transport (50) and air transport (51)
 - Legal and accounting activities (69)
 - Activities of head offices; management consultancy activities (70)
 - Architectural and engineering activities; technical testing and analysis (71)
 - Advertising and market research (73) and other professional, scientific and technical activities (74)
 - Employment activities (78)
 - Security and investigation activities (80)
 - Financial service activities, except insurance and pension funding (64)
 - Insurance, reinsurance and pension funding, except compulsory social security (65)
 - Activities auxiliary to financial services and insurance activities (66)
-

Source: Eurostat (LMLT and HMHT manufacturing – https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:High-tech_classification_of_manufacturing_industries, Dynamic services – [https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Knowledge-intensive_services_\(KIS\)](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Knowledge-intensive_services_(KIS))).

© The Author(s) 2024. Published by Oxford University Press and the Society for the Advancement of Socio-Economics.

This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<https://creativecommons.org/licenses/by/4.0/>), which permits unrestricted reuse, distribution, and reproduction in any medium, provided the original work is properly cited.

Socio-Economic Review, 2024, 22, 1783–1809

<https://doi.org/10.1093/ser/mwae018>

Article