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The Baltic growth model: Balanced growth under the EMU playbook

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Abstract

This article analyses the growth model (GM) of the Baltic States. Contrary to prevailing accounts in the literature, it argues that following the GFC, the Baltic States transitioned to a balanced GM. While austerity facilitated adjustment during the crisis, the subsequent balanced growth path was conditioned by an increasing wage share, a broad distribution of wage gains across both sheltered and exposed sectors, consumption growth, and robust export performance despite the rising real effective exchange rate. The paper identifies Lithuania as the most clear-cut case of balanced growth over the period 2010–22. Overall, the outcome of the Economic and Monetary Union's macroeconomic governance regime depends on the institutional features of the economy and may not necessarily result in purely export-led growth. Furthermore, balanced GMs can emerge without strong wage coordination but can be supported by alternative configurations, with labour market flexibility playing a prominent role in the Baltics.

Keywords

Baltic States, growth model, balanced growth, Economic and Monetary Union, euro area, labour market flexibility

Introduction

The Baltic States constitute a successful story of convergence with the European Union (EU) average. Following a deep contraction in 2009, they experienced sustained growth up to the global pandemic in 2020, quickly moving up the ladder of income. From 2010 to 2022, they grew from 2.26 (in Latvia) to 3.45% (in Lithuania) on average (IMF WEO; see Online Appendix for data sources mentioned in the text), overtaking even some of the older EU member states in Southern Europe as measured by purchasing power-adjusted GDP per capita (Eurostat).

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How can we account for these macroeconomic developments in the Baltics from the perspective of Comparative Political Economy (CPE)? In the years before and after the Global Financial Crisis (GFC), a significant share of scholarly attention to the Baltic States laid within the Varieties of Capitalism (VoC) approach (Hall and Soskice, 2001). Although based on micro foundations, the VoC was seen as able to provide insights on macroeconomic issues (Behringer and Van Treeck, 2022; Hope and Soskice, 2016; Kuokštis, 2015; Soskice, 2007). Among these insights was that 'purer' models of capitalism should be able outperform hybrid modes of coordination – hence the laggard post-crisis growth of the Mediterranean Mixed Market Economies (MMEs) such as Greece, Spain, or Italy (Hall and Gingerich, 2009; Hancké et al., 2007: 14). The Baltics were often characterized as close to Liberal Market Economy (LME)-type, although short of several important elements, such as developed equity markets and dispersed shareholder ownership (Feldmann, 2013; Kuokštis, 2011; Norkus, 2008). Lacking institutional coherence from the VoC perspective, one would expect sub-par performance of the Baltics. Nevertheless, growth outcomes have surprised on the upside.

The more recent CPE scholarship has shifted its focus from supply-side firm-centred institutional equilibria in VoC to demand-side growth models (GMs), grounded in post-Keynesian assumptions about macroeconomics (Baccaro et al., 2022; Baccaro and Pontusson, 2016, 2020; Hall, 2018; Johnston and Regan, 2018). In this strand of literature, the Baltic States were previously seen as a domestic demand-led GM that generated a boom-bust cycle before the GFC (Bohle, 2018; Dünhaupt and Hein, 2019). It is sometimes seen as having maintained a domestic consumption orientation after the GFC (Bohle and Regan, 2022), putting the Baltics' growth prospects into question due to the lack of major new FDI after the end of pre-crisis inflows, dependence on external EU financing (Bohle and Jacoby, 2017), as well as high inflation and its negative effects on price competitiveness (Medve-Bálint and Szabó, 2024).

During the post-crisis period, the Baltic States have implemented the macroeconomic regime of the Economic and Monetary Union (EMU) in terms of its fiscal rules and macroeconomic and financial stability measures. As suggested by Blyth and Matthijs (2017), linking macroeconomic regimes with GMs is necessary to generate insights into the economic policy drivers of the different modes of growth. Within the GM literature, the post-crisis EMU macroeconomic regime is seen as promoting export-led growth (Bramucci, 2023; Hein and Martschin, 2021; Johnston and Matthijs, 2022; Regan, 2017). Indeed, there is substantial evidence that the role of exports in the Baltics has increased significantly after the GFC in driving economic expansion (Baccaro and Hadziabdic, 2023; Dünhaupt and Hein, 2019; Kalanta, 2020, 2024; Picot, 2020).

The export-led strategies are seen as having faltered in the Mediterranean economies, which, just like the Baltics, had been domestic demand-led before the GFC (Hein and Martschin, 2021). This underperformance has been attributed to the aggregate demand policies supported by the EMU (Stockhammer and Novas Otero, 2023). While increasing the role of net exports by suppressing imports, they are deemed as having delivered stagnation rather than a genuine reorientation towards export-led growth (Kohler and Stockhammer, 2021). In this regard, one may have expected a similar result in the Baltics.

This paper aims to locate the Baltic States within the classification of the different GMs, focusing on the period 2010–22. Contrary to prevailing accounts that prescribe either a domestic demand-led or export-led model to the Baltics, it argues that the Baltic States ran a *balanced* GM, although one can certainly differentiate between the 'stronger' and 'weaker' cases among Lithuania, Latvia, and Estonia as regards the adherence to the criteria of balanced growth. While there was a clear strengthening of orientation towards exports in these economies, this facilitated growth of domestic consumption, with the trade-offs between the two demand components mitigated. The wage share increased significantly on the back of robust wage gains that were broadly distributed between the sheltered and exposed sectors. The balanced GM replaced the pre-GFC consumption-led model and

underpinned the economic convergence without generating major pre-crisis imbalances. I further show that among the three Baltic States, Lithuania was an exemplary case of balanced growth over the period observed which was reflected in its strong macroeconomic performance even during the pandemic.

The balanced GM in the Baltics was a result of the interplay of several factors. First, the three countries sustained export growth despite the increasing real effective exchange rate (REER), although sources of non-price competitiveness are easier to identify in Lithuania and Estonia, while they remain less apparent in Latvia. Second, the Baltic countries implemented the EMU's macroeconomic regime after the GFC, which mitigated several demand sources of growth, particularly through constraints on the credit channel, resulting in a transformation of their GM. Third, the EMU's regime interacted with the Baltic States' institutional landscape. The highly flexible and decentralized labour markets conditioned the broad distribution of wage increases and ruled out wage moderation.

This article's contribution is severalfold. First, it adds to the debates on the diversity of growth models in Europe. Second, it presents an alternative account of the post-GFC GM in the Baltics. The strong adjustment during the crisis did not produce a clear-cut case of export-led growth, as the post-crisis growth path was broadly balanced, with consumption supported by robust wage gains. Finally, the paper shows how the GM perspective can accommodate a plethora of institutional and macroeconomic configurations, while still retaining its useful parsimony. The EMU macroeconomic governance regime may not lead to export-led growth depending on the distribution of wage gains and the ability to rely on non-price competitiveness factors, while balanced GMs can emerge without strong wage coordination.

The paper proceeds with a review of the relevant literature regarding the GM in the Baltic States and lays out the main features of balanced growth. Subsequently, I present an empirical analysis of the Baltic GM regarding growth contributions, sources of financing consumption, and the price and non-price competitiveness. I also show how the macroeconomic regime promoted by the EMU translated into a balanced, rather than purely export-led growth. Finally, this is followed by conclusions.

Theory and the case of the Baltics in the literature

The post-Keynesian GM framework has brought back the examination of the sources of expansion of aggregate demand that are mobilized to secure economic growth. In the Baccaro–Pontusson framework applied in this article, three key factors help determine a growth model: (a) the relative importance of consumption and exports; (b) different ways of financing consumption; and (c) the presence or absence of trade-offs between consumptions and exports (Baccaro and Pontusson, 2016: 199; Hassel and Palier, 2020: 12; Baccaro et al., 2022: 12). In Baccaro and Pontusson (2016, 2020), these trade-offs are analysed by evaluating the price sensitivity of exports.

Scholarship generally discusses the dichotomy of two foundational models that replaced the wage-led GM of the Fordist era. The first is domestic demand-led, best exemplified by the United Kingdom and the United States. In this model, growth is (a) driven by domestic demand (in most cases mainly household consumption, therefore consumption-led growth is often used synonymously), which is (b) described as debt-financed, supported by the wealth effect from property prices and credit markets complementing or even substituting wage growth (Reisenbichler and Wiedemann, 2022). Therefore, one of the tendencies of the consumption-led economies is for the current account to show persistent deficits. Finally, (c) exports are not price-sensitive and therefore do not rely on the repression of domestic consumption (Baccaro and Pontusson, 2016: 190).

A prototypical export-led economy (a) relies on foreign demand; therefore, exports play a prominent role in driving growth. In the period 2001–07, the contribution of net exports in Germany

amounted to more than 70% of total growth; an export-led GM also retains a high exports-to-consumption growth ratio (Baccaro and Pontusson, 2016: 187–89). In terms of (b) sources of domestic consumption, corporatist wage-setting institutions promote wage moderation to achieve real undervaluation (Baccaro and Höpner, 2022). This constrains the growth of unit labour costs and thus fosters the external sector's performance, but (c) comes at the expense of depressed demand in the domestic sector. Notably, part of this effect is due to limiting the sheltered sector wage growth relative to wage growth in the manufacturing sector, with Germany being the primary example of this dynamic (Johnston et al., 2014).

The GM framework differentiates between a country's growth strategy and its underlying institutional and political structure, allowing for two parallel strands of change (Streeck, 2016). Growth models are therefore transient arrangements as their evolution does not follow a functionalist logic of optimal efficiency, but instead a path conditioned by both politics and economics. Accordingly, GMs are seen as driven by cross-class social blocks (Amable, 2022) or business-centred growth coalitions (Baccaro and Pontusson, 2022), as well as macroeconomic regimes, which put the combination of economic policy drivers to the forefront (Blyth and Matthijs, 2017; Hein and Martschin, 2021; Kohler and Stockhammer, 2021).

The residual category of MMEs of the Mediterranean is generally described as having transitioned in the direction of export-led growth after the GFC, promoted by the EMU's macroeconomic regime (Baccaro, 2022: 20; Hein and Martschin, 2021; Johnston and Matthijs, 2022; Myrodias, 2024). Crucially, scholarship has seen this transition as unsuccessful, as the export sectors of these economies remain too small and uncompetitive (Baccaro, 2022), with the contribution of exports in growth decomposition increasing largely due to domestic demand repression (Kohler and Stockhammer, 2021). The EMU's macroeconomic regime is seen as precluding these economies from generating a domestic demand boost to achieve a higher equilibrium output (Kohler and Stockhammer, 2021).

The GM perspective sheds light on several important issues pertinent to the evolution of modern capitalist economies. It shows that the interaction of export-led and domestic demand-led GMs can generate macroeconomic imbalances. This effect is especially pronounced in a monetary union, where wage moderation in export-led economies cannot be countered by nominal devaluation (Hall, 2018; Iversen et al., 2016; Johnston and Regan, 2016). By putting the distribution of income at the centre of analysis, the growth model literature also argues that export-led and consumption-led growth have distinct implications for income inequality (Behringer and Van Treeck, 2022).

A closely related strand of scholarship has also emphasized the effects of the global trend of financialization on the evolution of growth models. It associates the rise of global finance with a falling wage share, lower investment in capital stock, and increased shareholder power (Hein, 2012). In response, different 'demand and growth regimes under financialization' emerged to cope with these depressive macroeconomic effects (Hein and Martschin, 2021). The regimes are based not only on relative contributions of aggregate demand components but also on sectoral financial balances. The latter allows both a more elaborate discussion of the *sources* of growth component financing and the related financial instabilities, while also helping to establish a more detailed taxonomy of growth regimes (Hein, 2019: 980; Hein et al., 2021; Hein and Martschin, 2021; Kohler and Stockhammer, 2021: 1315).

In the GM literature, the Baltic States are often described as primarily domestic demand-led, especially in the period before the GFC (Bohle, 2018; Dünhaupt and Hein, 2019). Several authors argued that after a deep internal devaluation during the crisis, orientation towards a domestic demand-led model stayed intact (Bohle, 2018; Bohle and Regan, 2022), as suggested by domestic inflationary pressures and a quick return to an appreciating REER (Medve-Bálint and Szabó, 2024).

However, this account merits revisiting. Labelling the Baltics' GM as domestic demand-led post-crisis appears inconsistent with improved external positions, reduced household debt, and strong

export performance, explored in the subsequent sections. Indeed, several scholars have shown that a shift *has* taken place in the Baltic growth model towards export-led growth (Baccaro and Hadziabdic, 2023; Dünhaupt and Hein, 2019; Kalanta, 2024; Picot, 2020).

While the role of exports has certainly increased in the Baltic macroeconomic performance, the Baltic economies do not easily fall into the export-led category either. First, consumption continues to be an important driver of growth, resulting in steadily increasing REER. Furthermore, as noted by Kalanta (2020), the Baltics lack the foundation of a prototypical export-led model – namely, wage coordination. This calls for an explanation of drivers of export-led growth, for example, in terms of a macroeconomic regime (Hein, 2019). Overall, the post-GFC developments in the Baltic States GM merits further investigation.

Balanced growth

Scholarship has also identified a balanced GM, exemplified by Sweden (Baccaro and Pontusson, 2016, 2020), but also the broader group of Nordic countries, France, and Ireland before the crisis (Høgedahl et al., 2024; Johnston and Matthijs, 2022: 121). In terms of (a) the relative importance aggregate demand components, balanced growth is driven by both exports and private consumption. A balanced economy *can* be export-led in a sense that exports constitute a primary vehicle for growth. However, under a balanced model, exports allow for more consumption growth than in a purely export-based economy. As put by Erixon and Pontusson (2022: 268):

> 'Both economies were export-led but export growth generated more consumption growth in Sweden than in Germany, and thus boosted growth of importcompeting goods and sheltered services. It is in this specific sense that the Swedish growth model of 1994 to 2007 can be characterized as "balanced"'.

While the GM framework is more focused on the structural composition of demand components, temporal dynamics can also be important. In a balanced economy, different growth drivers can take the lead over the business cycle. As put by Baccaro (2022: 19), under a balanced model, exports can pull the economy out of a recession, with consumption then driving the expansion. Nevertheless, consumption growth should not crowd out the growth of exports (and vice versa), which means that the growth ratios of these components should remain relatively stable over the long term. This is because under balanced growth, there is no substantial trade-off between the growth of exports and the growth of domestic demand as exports do not rely on wage restraint (Baccaro and Pontusson, 2016: 189), while wage gains are allowed to diffuse across sectors, as discussed below.

As regards (b) financing of consumption, the dynamics of the distribution of wage gains are at the core of the balanced GM's viability. Barredo and Buendía (2024) showed how private credit growth facilitated a 'hybrid' growth model in Sweden during the period of 2000–08. This aligns with Baccaro et al. (2022) who argue that Sweden retains features of wage-led model while also relying on debt-financed consumption. Unlike Germany, Sweden is characterized by a balanced wage growth between the sheltered and exposed sectors (Høgedahl et al., 2024). A 'German-style dualization' is avoided, as the service sector in Sweden is well-organized, resulting in service sector wages being stable relative to manufacturing (Thelen, 2020: 214). Coordinated bargaining can thus serve not only as a mechanism of wage restraint but also of wage growth diffusion, supporting consumption.

As for (c) the trade-off between consumption and exports, balanced GM solves it by relying on non-price competitiveness. As argued by Thelen (2020), the structure of organized labour in Sweden, particularly the union strength in lower-end sheltered sectors, contributed to an increased reliance on higher-end, more knowledge-intensive segments of manufacturing and services. As a

result, there is an absence of a significant trade-off between consumption and exports (Baccaro, 2022: 19).

Against this background, I now turn to an empirical analysis of the growth model of the Baltic States, based on the three dimensions discussed above – the relative importance of consumption and exports, the financing of consumption, and the price and non-price competitiveness.

Empirical analysis of the Baltic States' growth model

The relative importance of consumption and exports

Following one of the deepest contractions in the world during the GFC, the Baltics States mounted a strong recovery, defying pessimistic predictions. To what extent can we consider the Baltic GM as export-led in the period after the GFC, as suggested by some CPE scholars? As in the GM literature, Table 1 reports the yearly growth contributions of different aggregate demand components during the analysed period. Table 1 also includes information on financial balances of public, household, and corporate sectors, as well as the current account balance, and distinguishes between three periods: 2001–07, the post-crisis period from 2010 to 2019, and the subsequent years affected by the global pandemic (2020–22). The data for 2010–19 is disaggregated into the immediate post-crisis years 2010–13, and subsequent 3-year periods from 2014–16 to 2017–19.

Several conclusions can be drawn from the data. First, there was a pronounced shift in the Baltics' GM after the GFC. In 2010–2019, the contribution of net exports turned from markedly negative in all the countries to positive in the case of Lithuania, and slightly negative in the case of Latvia and Estonia. It increased during the pandemic in 2020–22 in Lithuania but fell somewhat in both Latvia and Estonia. The deep pre-crisis current account deficits turned to broadly balanced current accounts, becoming positive in Lithuania and Estonia in 2010–19 and slightly negative in Latvia. As shown by Staehr (2024), while GDP growth in the Baltics was associated with a deteriorating current account before the GFC, the reverse was the case after the GFC, as growth was associated with an improving current account. The change in the GM dynamics after the GFC took place primarily on the back of the private sector deleveraging, including by the corporate sector. This aligns with the financialization literature that has captured the change of the previous 'debt-led private demand boom' economies after the GFC due to private deleveraging (Hein, 2019; Hein et al., 2021).

Second, looking at temporal developments, exports played a crucial role in pulling the three countries out of the GFC. Between 2010 and 13, the contribution of exports (without subtracting imports) to growth was higher than in 2001–07 in all three Baltic States, despite the significantly lower GDP growth rates. During this period, real export growth in the Baltics averaged 11.8%, with Estonia and Lithuania leading the EU (AMECO). During this period, the exports-to-GDP ratio increased significantly, rising from an average of 50.0, 38.6, and 61.3% in Lithuania, Latvia, and Estonia 2001–07 to 74.5, 61.3, and 79.0% in 2010–22, respectively (Eurostat). Export contributions declined in 2014–16 due to Russia's military intervention in Ukraine, prompting the Baltics adjust further away from the Russian market. Export contribution bounced back strongly in Lithuania in 2017–19, while the subsequent increase was somewhat lower in Latvia and Estonia.

Finally, despite the importance of exports, net exports' contribution to growth over 2010–22 was relatively low, or slightly negative in the case of Latvia and Estonia, reflecting the strong performance of imports and, in turn, domestic consumption. Table 1 reports the ratios of real export growth (A) to consumption growth (B) (A/B ratio). The ratio was low (below 1.5) in the run-up to the GFC in all three economies, reflecting the dynamics of a domestic demand-led model relying on rapid consumption expansion. The ratio increased post-crisis, averaging 3.07 in Lithuania, 2.01 in

Table 1. Indicators on the Growth Model of the Baltic States.

	Lithuania					
	2001–7	2010–13	2014–16	2017–19	2010–19	2020–22
Real GDP growth	8.11	3.79	2.67	4.23	3.61	2.9
Consumption contr.	6.04	0.92	2.46	1.92	1.68	1.26
Investment contribution	3.43	1.25	0.84	1.67	1.25	1.42
Government contribution	0.53	−0.07	0.03	−0.02	−0.03	0.07
Exports contribution	6.33	7.90	1.23	7.22	5.70	7.31
Imports contribution	−8.64	−6.74	−2.71	−5.39	−5.13	−6.20
Net exports contribution	−2.31	1.15	−1.48	1.84	0.57	1.11
Current account balance	−7.78	−0.84	0.03	1.72	0.19	0.85
Public sector balance	−1.35	−4.68	−0.84	0.49	−1.98	−2.73
Household sector balance	−0.50	0.49	−2.91	−2.75	−1.50	2.93
Corporate sector balance	−5.60	7.35	5.48	5.17	6.14	2.40
Real exports growth (A)	13.78	12.27	1.85	10.14	8.50	9.69
Real consump. growth (B)	9.40	1.57	4.00	3.16	2.77	2.29
A/B	1.47	7.82	0.46	3.21	3.07	4.23
Latvia						
Real GDP growth	8.97	1.79	2.72	2.63	2.32	2.06
Consumption contr.	6.52	2.56	1.32	1.25	1.79	1.52
Investment contribution	4.83	1.05	−1.01	1.67	0.62	0.22
Government contribution	0.79	−0.24	0.50	0.69	0.26	0.69
Exports contribution	4.40	4.74	2.83	2.15	3.39	4.38
Imports contribution	−8.34	−5.50	−1.78	−3.55	−3.80	−5.17
Net exports contribution	−3.94	−0.76	1.04	−1.41	−0.41	−0.79
Current account balance	−13.04	−2.14	0.07	0.30	−0.74	−2.17
Public sector balance	−1.27	−4.0	−1.08	−0.61	−2.10	−5.39
Household sector balance	−3.86	−2.14	−1.20	1.24	−0.84	3.0
Corporate sector balance	−6.72	6.51	4.34	0.82	4.15	1.77
Real exports growth (A)	10.94	9.05	4.51	3.43	6.00	6.73
Real consump. growth (B)	10.53	4.24	2.21	2.10	2.99	2.80
A/B	1.04	2.13	2.04	1.63	2.01	2.40
Estonia						
Real GDP growth	7.72	3.87	2.75	4.35	3.68	1.44
Consumption contr.	5.13	1.54	2.29	1.91	1.88	1.54
Investment contribution	4.76	2.66	−0.10	2.54	1.79	0.84
Government contribution	0.64	0.35	0.44	0.40	0.39	0.41
Exports contribution	6.83	9.86	1.55	3.16	5.36	5.37
Imports contribution	−10.29	−10.10	−1.62	−3.23	−5.49	−6.79
Net exports contribution	−3.47	−0.24	−0.07	−0.08	−0.14	−1.42
Current account balance	−11.63	0.27	1.01	1.41	0.83	−3.34
Public sector balance	1.66	−0.10	0.34	−0.41	−0.06	−3.02
Household sector balance	−4.67	0.20	1.54	2.08	1.17	−1.0
Corporate sector balance	−6.97	3.22	1.01	1.46	2.03	4.8
Real exports growth (A)	11.23	13.99	2.00	4.24	7.47	7.70
Real consump. growth (B)	9.35	3.03	4.41	3.71	3.65	3.07
A/B	1.20	4.62	0.45	1.14	2.05	2.51

Sources: Data for real GDP growth is from the IMF WEO database. Data for growth contributions, current account balance, public sector balance, and exports/consumption are from the AMECO database: online data codes CVGD0 (consumption contribution), CVGD2 (investment contribution), CVGD1 (government contribution), CVGD6 (exports contribution), CVGD8 (imports contribution), CVGD9 (net exports contribution), BPM6 (current account balance), UBLG (public sector balance), OXGS (exports at constant prices), and OCPH (household consumption at constant prices). Data for household sector balance and corporate sector balance are from OECD (Net lending/borrowing by sector).

Latvia, and 2.05 in Estonia in the period 2010–19, prior to the pandemic. These values are comparable to Sweden's (2.7) as reported in Baccaro and Pontusson (2016: 187), a balanced model, but lower than Germany's (8.6), an export-led model, and higher than the UK's (1.4), a domestic demand-based economy.

Examining the temporal developments of the A/B ratio over the post-crisis period, consumption growth did not appear to crowd out export growth (or vice versa) during 2010–22. In 2010–13, exports grew rapidly in Lithuania and Estonia, far outpacing consumption. This trend reversed in 2014–16, when consumption surged, and the ratio of exports-to-consumption growth (A/B) fell below 1.0. Despite this, exports bounced back in subsequent periods, with the ratio exceeding 3.0–4.0 in Lithuania and 1.0–2.5 in Estonia during 2017–19 and 2020–22, respectively. This suggests no clear trade-off between the growth of the two components during post-GFC, as exports recovered despite robust consumption expansion. These dynamics are in line with the stipulation by Baccaro (2022: 19) discussed in the theoretical Section 2.1, namely that under a balanced model, the impact of exports and consumption can vary depending on the stage of the business cycle, but over the long term, one component should not permanently crowd out the other. In Latvia, the ratio has remained somewhat more stable across the analysed period, from 1.63 in 2017–19 to 2.40 in 2020–22, also supporting the view that consumption and exports grew hand-in-hand. If a trade-off existed, a negative correlation between consumption and export growth would be expected. Instead, correlation coefficients are weakly positive in Lithuania (0.069) and Estonia (0.014), and moderately positive in Latvia (0.395) over 2010–22. The Online Appendix provides a scatter plot visualizing this relationship after the GFC, with fitted trend lines for each country. Section 3.3 further examines the export–consumption trade-off in terms of price and non-price competitiveness.

Overall, the post-GFC trajectory of all three Baltic States is consistent with a balanced growth path, although to a differing extent across countries.[1] Exports were an engine of growth, especially immediately after the GFC, as reflected in exports contributions and the increased exports-to-GDP ratio. However, the orientation towards exports went together with robust consumption growth which did not cause current account imbalances typical of domestic demand-led economies. Lithuania's stronger export performance from 2017 onwards, with positive net exports and small current account surpluses, renders Lithuania the most strongly balanced economy over the entire period observed. Estonia and Latvia may have been transitioning to domestic demand-led growth over 2020–22, even though the household sector balances did not deteriorate significantly over this period (and improved in the case of Latvia).

Sources of financing consumption

Domestic demand under a balanced model can be sustained by two principal sources: credit and wages. In terms of the former, a clear structural break can be seen in the data for the Baltics, with household debt substantially decreasing and stabilizing at lower levels than before the crisis (see Figure 1).

Although the credit channel was mitigated, household consumption continued to be supported by wage gains. Figure 2 maps indices for real hourly labour compensation in services and manufacturing, with values set to 100 in 2009. It includes the Baltic States, as well as Sweden and the Southern economies of Italy and Greece for comparison, based on the theoretical insights regarding the application of the EMU macroeconomic governance regime. Looking at the case of the Baltics, wage growth in lower-end services did not trail behind the manufacturing sector – on the contrary, it was closely aligned. This shows a striking similarity to the case of Sweden, a prototypical case of a balanced GM. By contrast, in Italy and Greece, wages in services trail behind manufacturing – a dynamic similar to wage restraint prevalent in export-led economies (as discussed by Afonso et al. (2022), Mediterranean countries showed some capacity for wage restraint after the GFC).

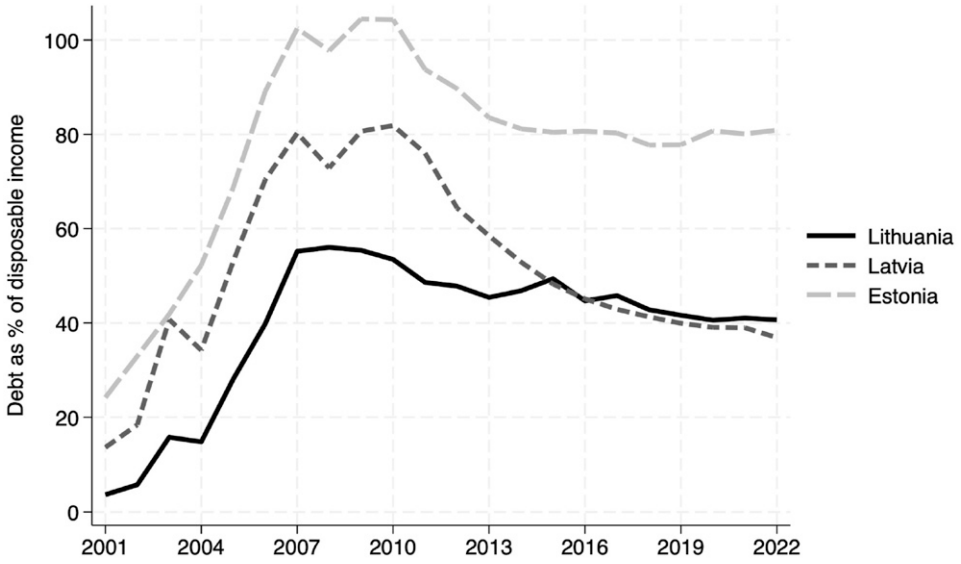

Figure 1. Household debt in the Baltic States (% of net disposable income), 2001–2022.
Source: OECD National Accounts Statistics.

In the case of the Baltics, broad-based wage increases resulted in increasing wage share, positively affecting domestic demand, as seen in consumption contribution figures in Table 1. Indeed, over the period of 2010–22, including the inflationary pandemic shock, the *real* average annual wage growth amounted to 2.84% in Estonia, 3.84% in Latvia, and 3.85% in Lithuania (OECD). Figure 3 shows how the wage share significantly decreased in the Baltics during the crisis and its immediate aftermath, but was steadily increasing afterwards (with Latvia and Estonia even overtaking Sweden).

The broad-based distribution of wage increases in all three Baltic States helped achieve a more balanced growth that did not rely solely on exports. The wage dynamics suggest that wage growth in the tradable sector, unlocked by productivity increases on the back of external demand, spilled over to real wage increases across sectors. This would be in line with Balassa–Samuelson effects which were observed in the Baltics (IMF, 2014; Meshulam and Sanfey, 2019; Wolf, 2016). The GM in the Baltics was therefore balanced in the sense that increasing exports helped create more demand than in a prototypical export-led economy with wage moderation.

Price and non-price competitiveness in the Baltics

Balanced growth typically rests on non-price competitiveness factors to support external performance without negatively affecting domestic demand (Baccaro and Pontusson, 2020; Erixon and Pontusson, 2022). As discussed by Barredo and Buendía (2024), non-price competitiveness strategies were key in running Sweden's 'hybrid' model during 2000–08.

All three Baltic States experienced a significant drop in real unit labour costs and REER after the GFC, which eventually caught-up with pre-crisis levels in 2017–18. This is to be expected, given the robust real wage developments in these economies. However, this did not prevent a robust export performance. Figure 4 plots the log of exports of goods and services at constant prices and REER, with base value in 2009 set to 100. From 2012 onwards, both exports and REER were growing simultaneously in all three economies.

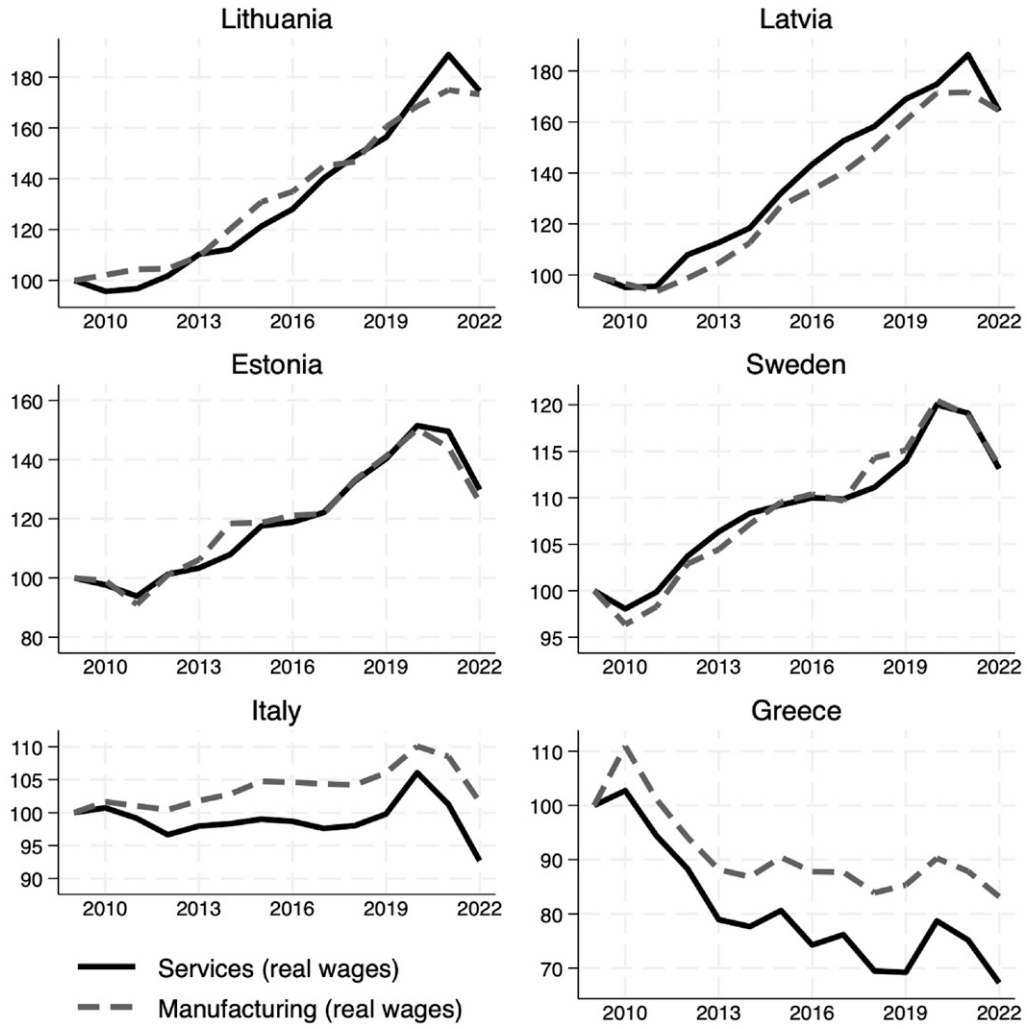

Figure 2. Real hourly labour compensation (manufacturing and services), 2010–2022.
Note: 'Manufacturing' includes sectors under ISIC Rev. 4 Section C. 'Services' includes sectors under ISIC Rev. 4 Sections G–I: Wholesale and retail trade, Transportation and storage, Accommodation and food service activities. *Source:* OECD Compendium of Productivity Indicators and IMF WEO.

Table A1 in the Appendix reports the results of models estimating the yearly log change in real exports for goods and services separately on the yearly log change in REER (ULC-based), controlling for EU growth. The analysis follows the approach of Baccaro and Pontusson (2016, 2020) and provides further (and more heterogeneous) insights into the price sensitivity of Baltic exports over the period 2010–2022. In Lithuania, neither goods nor services exports were price-sensitive at conventional levels of statistical significance, with the REER coefficient for goods exports significant only at the 10% confidence level. For Latvia and Estonia, goods exports were negatively associated with REER, with a highly significant negative coefficient (in Latvia, a 1% increase in REER was associated with a 1.1% decrease in *growth* of goods exports, and a corresponding 2.26%

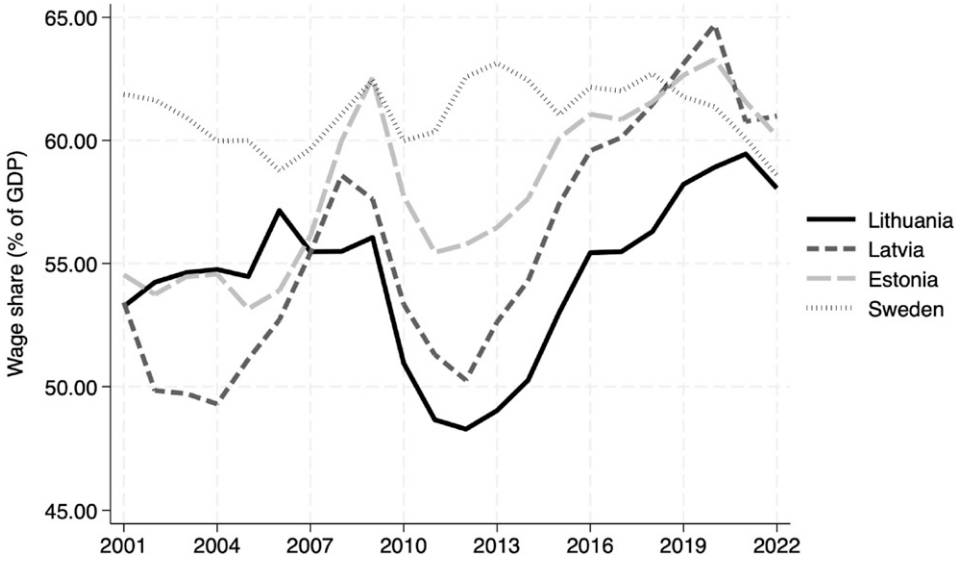

Figure 3. Adjusted wage share as percentage of GDP at current factor cost for the Baltic States and Sweden (2001–2022).
Source: Data from the AMECO database (online data code: ALCD2).

decrease in Estonia). In terms of service sector exports, they were not price-sensitive in Estonia, as indicated by the non-significant REER coefficient. In Latvia, services exports were positively associated with REER, suggesting that a real appreciation was linked to higher services exports. This indicates that rising prices did not negatively impact demand for Latvia's services.

While a deeper investigation is warranted regarding the price-sensitivity factors, separate explanations for the three economies lie behind the robust export performance in view of appreciating REER. Figure 5 plots labour productivity in the exposed manufacturing sector and medium and high-tech manufacturing value added in the Baltic States during 2009–2022. The figure shows that all three countries managed to substantially increase labour productivity in the tradable goods sector over the analysed period, which allowed for increases in real wages, although the productivity gains were largest in Lithuania and Estonia, with Latvia lagging behind.

As suggested by the figure, the productivity increase in Lithuania can be associated with an increased share of medium and high-tech manufacturing value added. More specifically, looking at the available Eurostat data, it was the medium–high technology manufacturing that increased the most: from 2010 to 2020, the share of medium–high manufacturing value added at factor cost in total manufacturing value added increased from 19.1% to 25.2%, while the share of high-technology manufacturing only increased from 3.9 to 5.1% (Eurostat). Such upgrading could be associated with strong capital deepening in the post-crisis period, sustaining Lithuania's balanced GM. From 2010 to 2022, net capital stock per person employed increased by 36.7% (AMECO).

In Latvia, medium and high-tech manufacturing value added grew less than in Lithuania, while the net capital stock *decreased* by 6.1%. However, Latvia has a lower share of capital-intensive industries compared to the other Baltic States (IMF, 2024). Less capital-intensive sectors experienced stronger post-GFC labour productivity growth, benefiting from technological advancements without significant capital deepening. Nevertheless, evidence in Table A1 suggests that price competitiveness factors did play a role in Latvia's goods exports. This, together with manufacturing

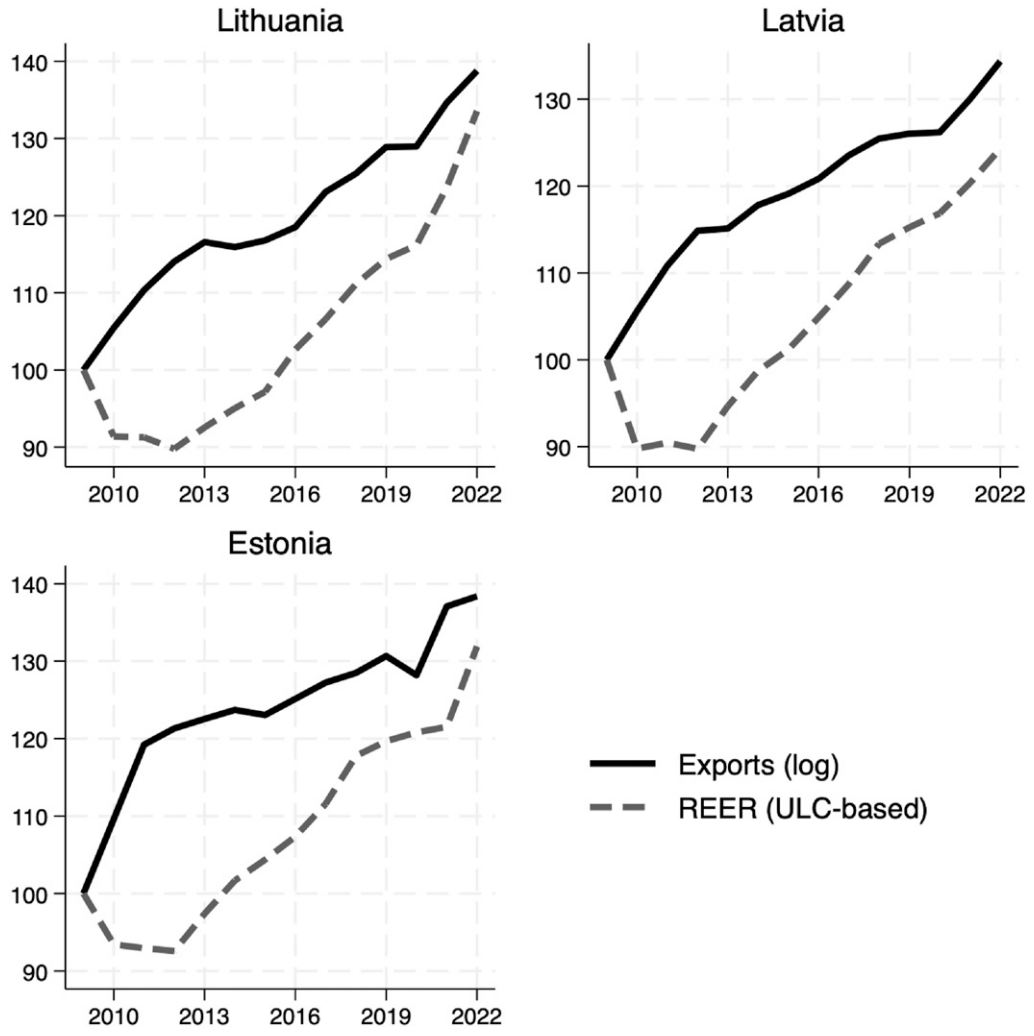

Figure 4. Exports (log) and REER (ULC-based) in the Baltic States (2010–2022).
Source: Elaborations on data from AMECO (Exports of goods and services at constant prices, online data code: OXGS) and DG ECFIN (Real Effective Exchange Rate, Price and Cost Competitiveness data).

productivity gains being the lowest among the Baltics, aligns with the overall poorer economic growth performance of Latvia over 2010–22 compared to Lithuania and Estonia.

In Estonia, an important source of non-price competitiveness stemmed from outside of the manufacturing sector. As documented by Kalanta (2024), dynamic and particularly ICT service exports significantly contributed to Estonia's growth during post-crisis period, more so than in the other Baltic countries. The share of ICT and financial and insurance activities in Estonia's gross value added stood at 11.9% in 2022, compared to 9.4% in Latvia and 7.9% in Lithuania (Eurostat). Service exports as percentage of total exports were highest in Estonia over 2010–22 and averaged 32.5%, compared to 28.5% in Latvia and 24.7% in Lithuania (AMECO). As shown in Table A1, service exports in Estonia were not price-sensitive.

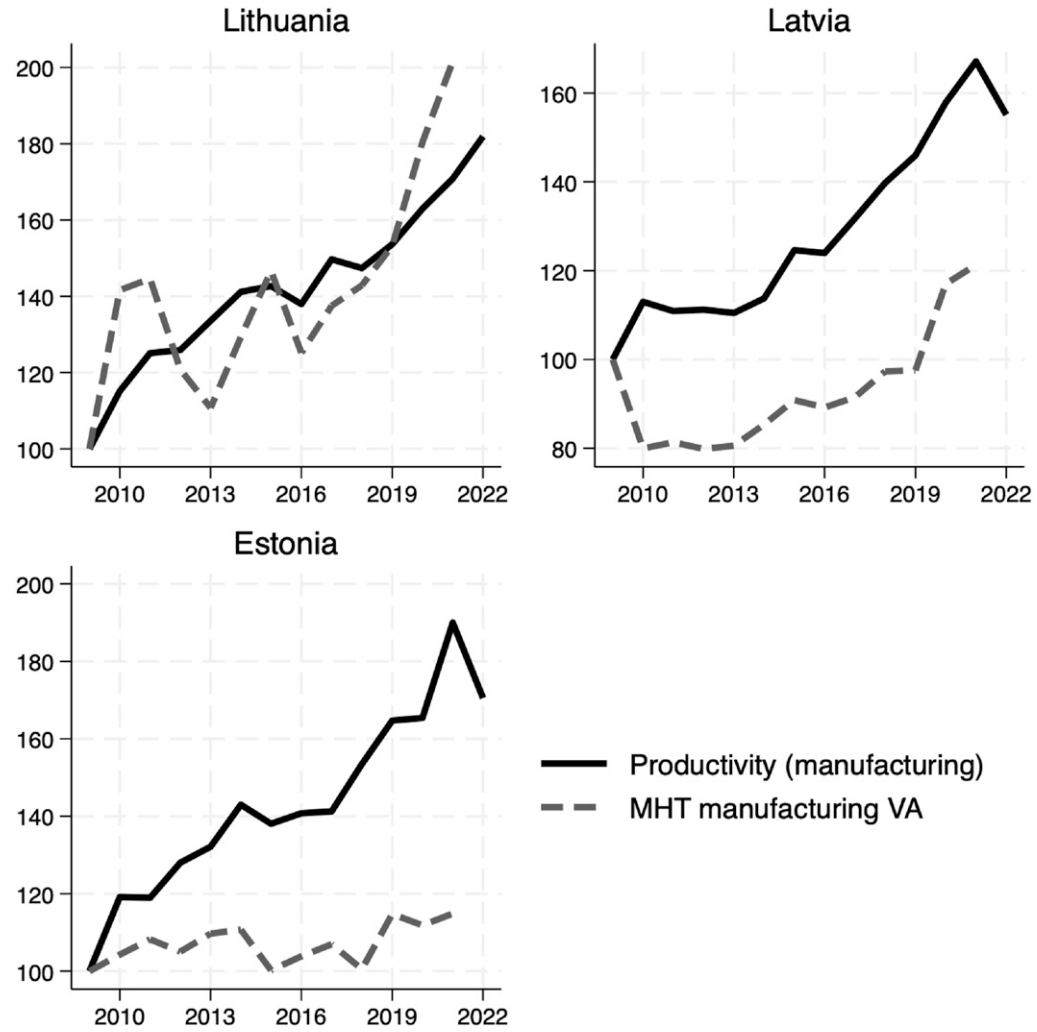

Figure 5. Labour productivity and medium and high-tech manufacturing value added in the Baltic States (2010–2022).
Note: The figure displays the evolution of gross value added in manufacturing per hour worked (constant prices) and medium and high-tech manufacturing value added as a share of manufacturing value added. *Source:* Own elaborations on data from OECD Compendium of Productivity Indicators and World Development Indicators.

Overall, in all three countries exports grew despite the appreciating REER, though the degree of reliance on non-price competitiveness factors varied. These factors were strongest in Lithuania, which saw upgrading in the tradable goods sector, and Estonia, in which higher value-added dynamic services played a more prominent role. This facilitated balanced growth, as export performance supported robust wage gains and allowed a sizable contribution of consumption to GDP growth. While Latvia's manufacturing sector saw productivity increases post-GFC, the lack of upgrading made its exports more susceptible to price pressures. Accordingly, real wage growth (and economic growth) was lowest in Latvia over 2010–22.

Considering the empirical evidence presented in these sections, all three Baltic States followed a balanced growth path after the GFC. However, Lithuania can be considered as an exemplary case as it best fits the related criteria of a balanced GM, while Latvia aligns the least, with Estonia falling in between.

EMU's macroeconomic regime in the Baltics

To better account for the dynamics outlined in the previous section, I proceed with the underlying macroeconomic regime analysis of the Baltics. The post-Keynesian notion of macroeconomic regimes considers the complete macroeconomic policy mix of monetary, wage and fiscal policies, as well as their interactions within a specific institutional context (Blyth and Matthijs, 2017; Hein and Martschin, 2021).

The pre-crisis consumption-led growth generated major imbalances in the form of large and persistent current account deficits. From 2003–07, cumulative net capital inflows were 85% of 2003 GDP in Lithuania, 111% in Estonia, and 166% in Latvia (Bakker and Gulde, 2010). Expansionist policies and capital inflows, while enabling domestic demand-led growth, drove credit expansion, real estate bubbles, and foreign-currency denominated external debt. The latter was an important factor behind the three countries refusing to devalue their currencies and instead undertaking a heavily front-loaded internal devaluation when the crisis hit (Walter, 2016).

Post-crisis, the macroeconomic regime shifted, primarily guided by the EMU's macroeconomic governance rules, in particular the Stability and Growth Pact. The commitment to macroeconomic rebalancing initially stemmed from the goal of meeting the euro adoption criteria (Dandashly and Verdun, 2020). It was spurred on by the painful crisis experience outside of the single currency area: the government bond spreads rose rapidly, reflecting the risk of currency devaluation. More broadly, the geopolitical context and strong pro-European sentiment ensured that the 'EU leash' on macroeconomic policy remained largely uncontested (Medve-Bálint and Szabó, 2024).

Throughout 2010–19 (before fiscal expansion induced by the pandemic), the Baltics pursued relatively conservative fiscal policies. In 2010–19, structural balances improved in 5 of 10 years in Estonia (which maintained positive structural balances even before the crisis), 6 years in Latvia, and 7 years in Lithuania. Average annual changes were +0.01, +0.42, and +0.72 percentage points, respectively (IMF WEO). Policymakers adhered to the EMU's fiscal rulebook without providing significant demand stimulus.

A key structural shift occurred in financial stability policy. From 2007 to 2019, all three Baltic States implemented macroprudential measures to curb mortgage credit growth, one of the main engines of the domestic demand-led model prior to the GFC, including loan-to-value ratios, debt service-to-income limits, and loan maturity caps (European Systemic Risk Board, 2024). This comprehensive set of macroprudential instruments is one of the largest in the EU and is considerably wider than in demand-based economies, such as the United Kingdom. Accordingly, household debt stabilized at lower levels after the GFC, as shown in Figure 1.

Overall, policymaking in the Baltics focused on avoiding macroeconomic imbalances that resulted in the painful crisis experience. After the GFC and up to 2022, only Estonia (once in 2016) was identified as warranting an 'in-depth review' under the EU's Macroeconomic Imbalance Procedure (European Commission, 2024). However, the top-down application of EU macroeconomic policy stance did not kill off domestic demand which would have resulted in an export-led model, as explained below.

The importance of labour market flexibility

From a GM perspective, the key institutional domain is labour market institutions and collective bargaining structures, as they directly affect income distribution brought into the forefront by the GM literature. In the case of the Baltic States, the literature characterizes them as having a very high degree of labour market flexibility (LMF) (Masso et al., 2015; Staehr, 2017). First, the existing regulations are characterized by a lax enforcement. As put by Eamets (2013), even where regulation is formally rigid, a high degree of flexibility is observed in practice at the micro level.[2] This stems from a somewhat limited state capacity to impose formal rules and a strong position of the employers vis-à-vis their employees (Kuokštis and Vilpišauskas, 2022; Purifield and Rosenberg, 2010), which can in part be explained by the predominance of small and medium enterprises (SMEs) with concentrated ownership (Kalanta, 2020).

Second, the bargaining structure in the Baltics is extremely decentralized, with very low bargaining coverage and union density. Bargaining coverage stands at 26.6, 27.1, and 19.1%; and union density at 10.0, 11.6, and 6.0% in Lithuania, Latvia, and Estonia, respectively (OECD/AIAS ICTWSS). These figures are in direct contrast to Sweden, a balanced GM, where the corresponding estimates are 88.0 and 65.2%. However, as per Calmfors–Driffill hypothesis, both highly centralized and decentralized systems can perform similarly in terms of the macroeconomic outcomes (Calmfors and Driffill, 1988; Soskice and Iversen, 2000). This is evident in various labour market outcome variables. Rusinova et al. (2015) showed that real wage flexibility is highest among the deregulated economies (which include the Baltics in their sample) and countries with centralized bargaining structures. According to the IMF, there is a close long-term relationship between real wages and productivity in the Baltics, explained by LMF (IMF, 2023: 49).

How does this relate to the dynamics of broad wage distribution as shown in Figure 2? The distribution of wages aligns with the Balassa–Samuelson effect observed in the Baltics, where wages in the non-tradable sector are catching up with those in the more productive tradable sector (IMF, 2014; Meshulam and Sanfey, 2019; Wolf, 2016). A precondition for this effect is competitive labour markets. In the Baltic context, LMF creates a uniform market for labour, which is reinforced by an education system oriented towards generalist skills, thus facilitating the fungibility of workers (Feldmann, 2013; Kuokštis, 2011, 2015; Norkus, 2008). Decentralized bargaining prevents the emergence of labour dual markets, where outsiders experience worse employment and wage outcomes than insiders, often protected by unions (Seo, 2021). This dualization dynamic has been observed by CPE scholars with regard to a prototypical export-led case of Germany (Thelen, 2014). At the same time, the Baltic manufacturing sector lacks the coordinating capacities that would prevent wage growth in the sheltered sectors (Kalanta, 2020). This facilitates the broad distribution of wage increases, which is not coordinated, but is rather led by market forces.

Overall, the case of the Baltic States demonstrates that the EMU macroeconomic policy regime can deliver balanced growth, but under a particular set of conditions. First, there must be a sufficient political consensus to adopt the recommended policies, even if this means a turn away from the earlier GM. The Baltic political elite consolidated around the goal of adopting the euro, which necessitated macroeconomic policies that mitigated several demand sources of growth in terms of fiscal policy and the credit channel. Second, a source of robust external performance should be found that supports export growth against the REER appreciation. Third, the key instrument for income distribution – the labour market institutions – must allow sheltered sector wages to follow tradable sector wages. Table 2 briefly summarizes Lithuania's balanced GM (as best exemplifying balanced growth in the Baltics), compared to the classic case of Sweden.

Table 2. Balanced Growth in Sweden Vs Lithuania.

	Sweden	Lithuania
Sources of aggregate demand to support growth	Net exports and consumption	Net exports and consumption
Sources of financing consumption	Credit, wages	Wages
Non-price competitiveness factors	Knowledge-intensive, high-value-added goods and services	Upgrading in the manufacturing sector (medium–high technology goods)
Mechanism for the diffusion of wages	Wage coordination between sheltered and exposed sectors	Flexible labour markets

Source: Own compilation.

Conclusions

This paper contends that over the period 2010–22, the Baltic States represented a case of a balanced GM. After a strong adjustment to the crisis, they were able to maintain robust export performance and increase exports-to-GDP ratios despite the appreciating REER, although non-price competitiveness factors were most evident in Lithuania and Estonia. The rise in exports went hand-in-hand with consumption growth (with no apparent trade-off between the two), and increasing wage share, which did not result in persistent current account deficits pertinent to consumption-led economies. Among the three Baltic States, Lithuania can be considered as the most clear-cut case of balanced growth over the entire period observed, owning to its strong external performance and economic growth from 2017 onwards, as well as the upgrading in its manufacturing sector.

Contrary to what may be expected, the EMU macroeconomic regime did not produce an obvious case of export-led growth in the Baltics. Compared to the MMEs of the Mediterranean, the institutional landscape in the Baltics allowed achieving a more Pareto-efficient equilibrium. At the core of the balanced GM is the wage channel that supports domestic consumption. As in a prototypical balanced GM, the Baltics saw a broad distribution of wage increases across both sheltered and exposed sectors. This paper argues that labour market flexibility was the key institutional domain that allowed for this wage dynamic to unfold.

The Baltic case provides interesting insights into the growth model framework. Contrary to the prevailing consensus in the growth model literature, the EMU macroeconomic governance regime may not lead to export-led growth, depending on the wage–competitiveness nexus. At the same time, a balanced GM may emerge without strong wage coordination, but on the back of alternative institutional arrangements. This suggests that the GM perspective is flexible enough to accommodate substantially different institutional and macroeconomic configurations, while still retaining its useful parsimony.

The paper opens several avenues for further research. The key area for additional inquiry is the sources of non-price competitiveness in the Baltics (including at industry or sectoral level), which would contribute inter alia to the upgrading literature (Kummritz et al., 2017). Crucially, a link between labour market flexibility on the one hand, and productivity gains needed to sustain balanced growth on the other, could be explored. This link could work through at least two channels. First, the broad wage diffusion in competitive labour markets can create pressures on the private sector to shift towards higher value-added goods and services (e.g. through investing in productive capital). Second, labour market flexibility can also facilitate

productivity-enhancing reallocation in the labour market across jobs and sectors (Kuokštis et al., 2022; Martin and Scarpetta, 2012).

Furthermore, research on the specific mechanisms behind labour market flexibility and the wage distribution nexus could be a promising avenue in the literature of political economy of wage distribution (Pontusson et al., 2002). Additionally, in terms of growth contributions and the external position, the trajectories of Lithuania on the one hand, and Estonia and Latvia on the other, seem to have begun diverging over 2020–22. This will merit an assessment on whether a genuine divergence of GMs is taking place. Finally, an account of the politics of the Baltics' GM after the crisis could flesh out the growth coalitions that enabled balanced growth (Baccaro and Pontusson, 2022), given that after the internal devaluation during the GFC, the Baltics generally did not embrace a path based on price competitiveness.

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Supplemental Material

Supplemental material for this article is available online.

Notes

1. Applying the typology of Hein (2019), one could assign 'export-led mercantilist' model to Lithuania from 2010 onwards, and 'weakly export-led' to Estonia in 2010–19. Similarly, analysing the demand contributions would result in Sweden's designation as a mercantilist export-led regime in 2010–19, and weakly export-led regime in 2020–22. However, these designations appear relatively sensitive to the cyclical factors of external demand. Applying the Baccaro–Pontusson framework, Sweden is a balanced GM based on the same criteria applied to the Baltic States in Sections 3.1–3.3.
2. OECD's EPL indices report a similar level of labour market flexibility in the Baltics and Sweden, although rigidity of regulations is lower in Lithuania and Estonia compared to Latvia. However, it is important to consider that existing regulations are characterized by a lax enforcement in the Baltics, as discussed in the text.

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Appendix

Table A1. Impact of Change in REER (ULC-Based) on the Growth of Export Volumes for Goods and Services (2010-2022), Lithuania, Latvia, Estonia.

	(1)	(2)	(3)	(4)	(5)	(6)
	Lithuania	Lithuania	Latvia	Latvia	Estonia	Estonia
	Goods	Services	Goods	Services	Goods	Services
REER	−0.529*	−0.450	−1.140***	0.429**	−2.263***	−0.537
	(0.278)	(0.404)	(0.0990)	(0.185)	(0.400)	(0.482)
EU growth	0.0116**	0.0172**	0.00323	0.0198**	0.0106**	0.0388***
	(0.00495)	(0.00692)	(0.00234)	(0.00678)	(0.00371)	(0.00900)
Constant	0.0682***	0.0930***	0.0808***	0.00686	0.100***	0.00885
	(0.0154)	(0.0216)	(0.00850)	(0.0162)	(0.0230)	(0.0235)
Observations	13	13	13	13	13	13
R-squared	0.270	0.376	0.724	0.557	0.671	0.717

Robust standard errors in parentheses.
***$p < 0.01$, **$p < 0.05$, *$p < 0.1$.
Source: AMECO database for exports of goods (online data code: OXGN) and services (online data code: OXSN) at constant prices; DG ECFIN for REER (Price and Cost Competitiveness data); IMF WEO database for EU growth.