



# 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

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## Abstract

This paper contributes to the growth models debate by expanding the concept of growth drivers to emerging capitalist economies (ECEs). Conceptually, the paper synthesizes growth drivers with a growth model operationalization based on GDP growth contributions and financial sector balances. Drawing on post-Keynesian and structuralist economics, as well as, empirical studies, seven growth drivers for ECEs are reviewed: income distribution, price and non-price competitiveness, commodity prices, private debt, foreign direct investment (FDI) and fiscal policy. Descriptive data for these drivers are presented for 19 regionally grouped ECEs between 2000 and 2019. On average, Asian ECEs exhibit higher growth rates, stable real exchange rates, high and increasing non-price competitiveness and high private debt levels. Latin American countries show comparatively lower growth rates, high but decreasing income inequality, unstable exchange rates and relatively expansionary fiscal policy after the Global Financial Crisis (GFC). Central and Eastern European countries generally display medium to high growth rates, lower income inequality, high non-price competitiveness, a substantial FDI stock and, after the GFC, real depreciations and contractionary fiscal policy. The assessment of cross-country growth drivers via bivariate coefficients reveals limited robust results, except for non-price competitiveness, which emerges as a significant driver. Additionally, we find indications that private debt and expansionary fiscal policy became more important for growth in ECEs after the GFC. This is in line with the emergence of domestic demand- and private debt-led growth models in ECEs following the GFC in the course of private deleveraging and austerity policies in developed capitalist economies.

**Keywords** Growth model · Growth driver · Financialisation · Emerging economies · Post-Keynesian economics · Comparative political economy

**JEL classification** E11 · E12 · E65 · F62 · F65

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## 1 Introduction

In the post-Keynesian literature, growth models have been operationalized using the GDP growth contributions of aggregate demand – consumption, investment, government expenditure and net exports – and the sectoral financial balances of the macroeconomic sectors – households, firms, the government and the external sector, found in national income and financial accounts (Hein 2011, 2012). This decomposition gives insights into the demand sources of growth and their financing at a macroeconomic level. Using this method to study the macroeconomics of financialisation, yielded the known constellation of export-led versus private debt-led growth models prior to the Global Financial Crisis (GFC) of 2007–09 (Stockhammer 2015). Meanwhile, this concept has been applied to the post-GFC constellation (Akçay et al. 2022; Dodig et al. 2016; Hein 2019; Dühaupt and Hein 2019; Hein and Martschin 2020; Hein et al. 2021). Furthermore, commenced by Baccaro and Pontusson (2016), the ‘growth models approach’ gained prominence within Comparative Political Economy (CPE).<sup>1</sup> This approach marks a shift within Comparative Capitalism from the Varieties of Capitalism (VoC) approach based on New Consensus Macroeconomics with supply-side determined long-run equilibria to post-Keynesian based demand-focused approaches. By doing so, issues of demand generation, instability, economic policies and international interdependencies move centre stage.<sup>2</sup>

While this approach has mostly been applied to developed capitalist economies (DCEs) (e.g. Hall 2018; Johnston and Regan 2018; Hein 2019; Hein and Martschin 2020; Hein et al. 2021; Van Doorslaer and Vermeiren 2021; Hassel and Palier 2021; Baccaro et al. 2022 and the contributions therein), attempts have been made to extend it to emerging capitalist economies (ECEs).<sup>3</sup> Schedelik et al. (2021) examine the growth trajectories of India, Brazil and China. They recommend the growth models approach to study ECEs while emphasizing the importance of retaining institutionalist aspects from the VoC literature. Nölke et al. (2022) compare the different growth trajectories of India and Brazil. Looking at VoC-categories and applying a growth models approach analysing demand formation, distribution and the dominant social bloc, they conclude that the latter is better suited to explain the divergence of the two countries. Morgan et al. (2021) examine the tension between institutional embeddedness and politics and its impact on growth model change by analysing Brazil’s experience between 2002 and 2018.

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<sup>1</sup> Originally, post-Keynesian authors used the term “demand and growth regimes” or “macroeconomic regimes” while “growth models” originated within CPE. If not otherwise specified, we will use these terms interchangeably throughout this article. Irrespective of the term, the concept should not be confused with the distinction between wage-led and profit-led demand that is going to be introduced in 2.1 and works at a different level of analysis.

<sup>2</sup> Stockhammer (2022a) provides an overview on the post-Keynesian fundamentals of the growth models approach.

<sup>3</sup> ECEs have featured in some large-scale analysis by post-Keynesian authors without considering their specific economic properties and role in the international growth model constellation (e.g. Dodig et al. 2016; Hein and Mundt 2012). The term ECEs refers to economies with a capitalist mode of production that feature some but not all of the characteristics of DCEs, e.g. in terms of financial and trade integration into world markets or sectoral composition of the economy.

Relatedly, Sierra (2022) investigates the underlying factors contributing to the persistence of commodity-driven growth models in Latin American countries. Schedelik et al. (2023), on the other hand, look at commodity-driven growth models in general and highlight the pro-cyclical effects on these models exerted by capital flows and commodity price swings. Mertens et al. (2022) investigate the growth models of eight ECEs and the social bloc dynamics of four. They add the category of an investment-led growth model and make the case that large ECEs may exhibit multiple, regionally different growth models. This is echoed by Tan and Conran (2022) who argue that the rise of China was driven by a hybrid system that comprised two growth models: an export-led and a state-led investment one.

Akçay et al. (2022) conduct an analysis of growth models in eight large ECEs. In the post-GFC context when DCEs became overall more export-led, they find that ECEs have not followed the trajectory of DCEs and instead switched to or continued pursuing domestic demand-led models (India, Argentina and Brazil), private debt-led ones (Turkey and South Africa) or decreased their export-led stance (China). Hence, ECEs, together with domestic demand-led DCE like the US and UK, have contributed to the necessary global counterpart to export-led mercantilist DCEs with high current account surpluses. Furthermore, Akçay et al. look into factors driving these changes. They find that, in some ECEs, improved income distribution helped to stabilize income-financed domestic demand while, on the other hand, further increases in financialisation boosted debt-financed private demand. In a similar way, Campana et al. (2024) complement their growth model analysis of Brazil, China, India and Russia by examining factors that drive export growth, income distribution and political conflict underlying fiscal policy.<sup>4</sup>

In this paper, we take up on the issue of what drives aggregate demand and ultimately growth in ECEs. In this context, the contribution this paper attempts is twofold. First, on a conceptual level, we address the criticism raised by Kohler and Stockhammer (2022) that growth model operationalization, which relies solely on the growth contributions of aggregate demand components and financial sector balances, does not provide meaningful insights into the causal drivers of growth. Therefore, they argue for a growth model operationalization based on *growth drivers* which are “factors that are not themselves part of aggregate income but influence the growth of its components” (Kohler and Stockhammer 2022, p. 1319). However, instead of arguing replacing one by the other, we make the case for a conceptual synthesis and present a set of potential growth drivers in ECEs. Building on post-Keynesian and structuralist economics as well as empirical studies on ECEs, seven growth drivers for ECEs are reviewed: income distribution, price and non-price competitiveness, commodity prices, private debt, foreign direct investment (FDI) and fiscal policy.

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<sup>4</sup> Campana et al. (2024) conduct a growth decomposition based on the Sraffian supermultiplier, distinguishing autonomous demand components and their contributions from that of induced components. Within the growth models strand, this method was first revitalized by Morlin et al. (2022) examining the United States, Germany, Japan and Sweden. Passos and Morlin (2022) applied this method to growth models in Latin America.

Second, we explore these growth drivers empirically for 19 ECEs.<sup>5</sup> We provide descriptive data on each growth driver for these ECEs in a regional grouping from 2000 and 2019. Furthermore, to investigate which growth drivers determined growth on a cross-country level in the years before and after the GFC, we establish bivariate coefficients. For the descriptive data, we find that the Asian ECEs exhibit on average higher growth rates, stable real exchange rates (RERs), higher and rising non-price competitiveness and high private debt levels. In Latin America, we find comparatively low growth rates, high levels of income inequality that are abating, unstable RERs and relatively expansionary fiscal stances after the GFC. The countries of Central and Eastern Europe (CEE), often with the exception of Russia, exhibit medium to high growth rates, comparatively low levels of income inequality, high non-price competitiveness and a high FDI stock. Moreover, their RERs were rather stable, particularly, after the GFC when they achieved overall depreciations while their fiscal policy stances became less expansionary. In terms of cross-country growth drivers derived from bivariate coefficients, our results remain sparse with the exception of non-price competitiveness that drove cross-country growth. Finally, in line with the descriptive findings of overall higher private debt and expansionary fiscal policy stances after the GFC, we find indications of both factors becoming more relevant as cross-country growth drivers during that time. This is in line with the emergence, respectively, persistence of domestic demand- and private debt-led growth models in ECEs following the GFC in the course of private deleveraging and austerity policies in DCEs (Akçay et al. 2022).

The remainder is structured as follows: Section 2 places the concept of growth drivers within growth model operationalization and reviews seven possible growth drivers for ECEs. Section 3 presents, first, descriptive data of each growth driver for 19 ECEs between 2000 and 2019 and, second, bivariate coefficients relating the development in growth drivers to GDP growth for the pre- and post-GFC period. Section 4 summarizes and discusses the empirical observations. Section 5 concludes.

## 2 Building blocks for a post-Keynesian analysis of growth drivers in emerging capitalist economies

In their paper, Kohler and Stockhammer (2022) have questioned the usefulness of the common post-Keynesian method of growth model operationalization for the post-GFC period. This method of growth decomposition operationalizes growth models based on the GDP growth contributions of aggregate demand and sectoral financial balances (e.g. Hein 2011, 2012, 2019). According to Kohler and Stockhammer (2022), the assessment of the formerly private debt-led Southern European peripheral economies

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<sup>5</sup> Our sample encompasses the Latin American ECEs of Argentina, Brazil, Chile, Colombia and Mexico; the Asian ECEs of China, Indonesia, India, Korea, Malaysia and Thailand; the Central and Eastern European ECEs of the Czech Republic, Hungary, Poland and Russia; the Middle Eastern ECEs of Israel, Saudi Arabia and Turkey; and South Africa. The sample was largely determined by data availability.

as export-led in the post-GFC years is misleading, as their export-led characteristics rather stem from private deleveraging and fiscal austerity depressing imports than from sustained export growth. Studies that identify these economies as export-led from a growth decomposition standpoint also cite private deleveraging and fiscal austerity as driving this development (Dodig et al. 2016; Hein and Martschin 2020; Hein et al. 2021). Still, Kohler and Stockhammer (2022) argue growth models should instead be understood through their growth drivers, as they offer information on why or why not demand components grew. The drivers considered by the authors are financial cycles, fiscal policy and international price as well as non-price competitiveness. In this perspective, the Southern European peripheral growth models underwent a debt-driven depression following their pre-GFC debt-driven growth due to the cyclical nature of finance-driven growth, exacerbated by contractionary fiscal policy.

We acknowledge the limitations of using GDP growth decompositions as the sole basis for growth model operationalization. While these decompositions identify the most dynamic aggregate demand components, they do not explain why these components grew. However, one should not throw the baby out with the bath water. One merit of growth model operationalization via national income and financial accounting is that they consider sectoral financial balances, which illustrate the financing of aggregate demand within and across economies, indicating the sustainability of and the interdependencies between growth models. This is particularly important as analysing national capitalisms in their totality and interdependence rather than in isolation sets the growth models approach apart from VoC (Schedelik et al. 2021, p. 518). And although the export-led versus private debt-led dichotomy came to an end with the GFC, international interdependencies between growth models persist. After the GFC, debt-led private demand growth models have ceased to exist among DCEs while export-led ones prevailed and increased in number. Domestic demand-led DCEs and ECEs with high public deficits and debt-led private demand ECEs have become the counterpart for export-led DCEs (Hein et al. 2021; Akcay et al. 2022). In general, national income and financial accounts will always provide relevant information on macroeconomic developments, even if they cannot in themselves provide causal explanations for demand and growth. Applicants of this method are well aware of this and complement their growth model analyses therefore with indicators of distribution and financialisation (e.g. Hein 2011, 2019; Hein and Mundt 2012; Akcay et al. 2022), link it to welfare models (Hein et al. 2021) or embed it in a comprehensive analysis of macroeconomic policies (Hein and Martschin 2021) – factors that can be considered growth drivers.

We advocate hence for the synthesis of growth decomposition and growth driver analysis because both approaches have their merits and inform each other. For once, growth models rely on growth drivers to derive demand and growth. And seemingly similar growth models from a growth decomposition standpoint may differ significantly depending on their growth drivers, e.g. in terms of sustainability and cyclicity. On the other hand, different growth drivers may become more relevant depending on the international growth model constellation, e.g. an economy may see it easier to grow based on growth drivers that stimulate exports within an international growth model constellation that supplies sufficient external demand

while in the face of depressed external demand growth drivers that stimulate domestic demand become more relevant (Akçay et al. 2022).

In what follows, we will set out the building blocks for an analysis of growth drivers in ECEs.<sup>6</sup> Building on post-Keynesian and structuralist economics as well as empirical studies on ECEs, seven growth drivers for ECEs are reviewed: income distribution, price and non-price competitiveness, commodity prices, private debt, FDI and fiscal policy. Arguing for the synthesis of growth model operationalization via national income and financial accounting with that via growth drivers, we point out how different growth drivers are expected to shape growth models. We will refer here to three types of growth models common in the post-Keynesian literature (e.g. Hein 2011, 2019; Hein et al. 2021; Akçay et al. 2022): 1) a *domestic demand-led growth model* is characterized by positive or balanced financial balances of the private sector and a balanced or negative current account. Correspondingly, net exports do not contribute to growth which almost exclusively stems from domestic demand; 2) an *export-led mercantilist growth model* exhibits positive financial balances of the private sector and a positive current account with positive net exports contributing to growth; 3) a *debt-led private demand (boom) growth model* is characterized by negative or close to balance financial balances of the private sector, in particular, of the household sector and a negative current account. Growth is driven by domestic demand, particularly, private demand and net exports contribute negatively to growth (Hein 2019, p. 980).<sup>7</sup>

## 2.1 Income distribution: rising wage share and reduced income inequality

Based on post-Kaleckian distribution and growth models, we review changes in the income distribution as a possible driver of growth (Bhaduri and Marglin 1990). In this framework, economies are either classified as wage-led if their demand and growth is positively affected by an increasing wage share or as profit-led in the opposite case. Whether an economy exhibits a wage-led or profit-led demand regime rests on structural properties such as the different propensities to consume, the responsiveness of investment to demand and profitability, the price sensitivity of net exports and the relevance of the respective aggregate demand component for total demand (Lavoie and Stockhammer 2013). Determining an economy's demand regime is an empirical task: More often than not, domestic demand is found to be wage-led. This is due to the positive effect of an increased wage share on consumption because of higher propensities to consume out of wage income than out of profit

<sup>6</sup> For a more general account on how to employ post-Keynesian economics and economic structuralism to analyse growth models in ECEs and developing economies see Stockhammer (2022b).

<sup>7</sup> A fourth category found in the literature is that of a weakly export-led growth model. Such a model shares some but not all features of an export-led mercantilist model and features of the other two models, e.g. it may exhibit positive growth contributions by net exports with a negative current account. We hence view it as an intermediate growth model which we for now exclude from the conceptual argument linking growth models and drivers. Further growth models are possible, particularly as the presented ones were derived from an analysis of DCEs. For example, Mertens et al. (2022) added an investment-led model, which for our purposes can be considered as a form of a domestic demand-led one.

income. Meanwhile, the effect of changes in income distribution on investment is often found to be insignificant. For total demand, profit-led cases are more likely due to a positive effect of the profit share on net exports. A total profit-led demand regime requires the rise in price competitiveness due to a lower wage share and the respective increase in net exports to outweigh the depressing effects on consumption out of wages. In this context, ECEs are more likely to exhibit total profit-led demand regimes due to their relative openness and price sensitive exports, especially, if they are small (see Table 1 and Hein (2014, pp. 302–303)). In any case, as stressed by Lavoie and Stockhammer (2013), the identified regime type neither implies that the functional income distribution developed accordingly nor that policies were applied to achieve such development; for example, a wage-led economy can exhibit a rising profit share due to pro-capital policies.

Particularly due to rising wage inequality, the exclusive focus on the functional income distribution has been questioned. Hein and Prante (2020) review the different Kaleckian growth models accounting for wage inequality: Some models distinguish direct from indirect/overhead labour, thereby, in the short run, the wage share becomes endogenous to economic activity in an inverse way, making demand appear profit-led when in fact the causality is reversed (e.g. Lavoie 2009). Alternatively, models split profits and wages between workers who own part of the capital stock and capitalists who receive wages in their function as managers. These models yield expansionary effects from increased workers' wage share irrespective of the demand regime due to workers' lower propensity to save. Thus, higher workers' wage shares increase the probability of wage-led demand as the overall propensity to save of wage income falls (Palley 2017). Another type of model incorporates persistence in basic consumption needs and interdependent consumption patterns, where lower-income ranks mimic the consumption behaviour of higher ranks. This leads to increased consumption and private debt ratios in response to higher profit shares and income inequality (e.g. Kapeller and Schütz 2015). Hence, according to these models, growth models based on private debt would be unlikely to occur with increases in wage shares and decreases in income inequality.

We conclude that growth driven by increasing wage shares and reduced income inequality are conducive to domestic demand-led regimes.<sup>8</sup> Domestic demand-led regimes have most of their growth stemming from domestic demand components, private consumption being usually the biggest. Since domestic demand is overwhelmingly found to be wage-led, it will be boosted by increases in the wage share and reduction in income inequality due to the higher propensities to consume out of wages and low income households.

## 2.2 Price competitiveness

As outlined in the previous section, increases in price competitiveness, i.e. real depreciations, increase demand if the rise in net exports it triggers outweighs the

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<sup>8</sup> We focus here on increases in the wage share and reduced income inequality as profit-led regimes rest on the expansionary effects of price competitiveness, which will be reviewed as a growth driver of its own in the next section.



**Table 1** Overview of studies investigating ECEs demand regimes

Country	Domestic demand		Total demand	
	Wage-led	Profit-led	Wage-led	Profit-led
Argentina	Onaran and Galanis (2012): 1970–2007; Alarco (2016): 1950–2012		Alarco (2016): 1950–2012; Oyvat et al. (2020): 1972–2007	Onaran and Galanis (2012): 1970–2007
Brazil	Alarco (2016): 1950–2012; Tomio (2020): 1956–2008; Araújo and Gala (2012): 1960–2008		Alarco (2016): 1950–2012; Tomio (2020): 1956–2008	Araújo and Gala (2012): 1960–2008; de Jesus et al. (2018): 1970–2008
Chile	Alarco (2016): 1950–2012			Alarco (2016): 1950–2012; Oyvat et al. (2020): 1967–1994
China	Onaran and Galanis (2012): 1978–2007; Jetin and Reyes Ortíz (2020): 1982–2016	Wang (2009, Chapter 3): 1993–2007; Molero-Simarro (2015): 1978–2007	Jetin and Reyes Ortíz (2020): 1982–2016	Onaran and Galanis (2012): 1970–2007; Wang (2009, Chapter 3): 1993–2007; Molero-Simarro (2015): 1978–2007
Colombia	Alarco (2016): 1950–2012		Alarco (2016): 1950–2012; Loaiza et al. (2017): 1970–2011	Oyvat et al. (2020): 1967–2011; Charpe et al. (2014): 1970–2010
India	Onaran and Galanis (2012): 1970–2007			Onaran and Galanis (2012): 1970–2007; Oyvat et al. (2020): 1964–2011
Indonesia				Kohli (2018) finds it for 1981–2012 to be either wage- or profit-led depending on the source of the distributional change
Korea	Onaran and Galanis (2012): 1970–2007; Kurt (2018): 1970–2011; Joo et al. (2020): 1982–2018		Onaran and Galanis (2012): 1970–2007; Onaran and Stockhammer (2005): 1970–2000; Oyvat et al. (2020): 1964–2011; Joo et al. (2020): 1982–2018	Oyvat et al. (2020): 1971–2011 Kurt (2018): 1970–2011
Malaysia				Oyvat et al. (2020): 1972–2011



**Table 1** (continued)

Country	Domestic demand		Total demand	
	Wage-led	Profit-led	Wage-led	Profit-led
Mexico	Onaran and Galanis (2012): 1970–2007; Alarco (2016): 1950–2012		Alarco (2016): 1950–2012	Onaran and Galanis (2012): 1970–2007; Oyvat et al. (2020): 1972–2009; Charpe et al. (2014): 1970–2011
South Africa	Onaran and Galanis (2012): 1970–2007		Oyvat et al. (2020): 1972–2007; Strauss and Isaacs (2016): 1970–2013	Onaran and Galanis (2012): 1970–2007
Thailand		Jetin and Kurt (2016): 1970–2011		Jetin and Kurt (2016): 1970–2011
Turkey	Onaran and Galanis (2012): 1970–2007; Yilmaz (2015): 1987–2006		Onaran and Galanis (2012): 1970–2007; Onaran and Stockhammer (2005): 1963–1997; Oyvat et al. (2020): 1964–2009;	Yilmaz (2015): 1987–2006

**Source:** Jiménez (2020), Akcay et al. (2022) and own extension  
 No studies on the demand regimes of the Czech Republic, Hungary, Israel, Poland, Russia and Saudi Arabia

domestic demand-depressing effects caused by the redistribution towards profits (Hein 2014, Chapter 7). Besides distributional issues, negative balance sheet effects can also impede the expansionary effects of increased price competitiveness. This is because real depreciations increase the cost of external debt, which in turn can constrain demand (e.g. Krugman 1999). Besides these potentially negative effects, there exists an extensive body of literature stressing the positive effects of price competitiveness, proxied as a depreciated or low RER, particularly in developing economies and ECEs (see Rapetti (2020) for an overview). Within this literature, price competitiveness fosters growth via the ‘tradable-led growth channel’. This channel stresses the role of ‘modern tradable activities’ and the associated structural transformation towards higher productivity activities. The channel rests broadly on three elements: higher level of productivity from modern tradable activities, an increase in overall productivity through structural change towards modern tradables and a low and stable RER that corrects for market failures and promotes accumulation in these sectors (Rapetti 2020, p. 36). Conversely, an appreciated RER may avert such favourable structural transformation and depress growth.

In sum, increased price competitiveness may affect growth negatively through negative balance sheet and distributional effects. On the other hand, it may boost growth via net exports and through the tradable-led growth-channel. Due to its positive effect on net exports and associated negative effects on consumption demand, price competitiveness as a growth driver will be conducive for export-led growth models.

### 2.3 Non-price competitiveness

The previously outlined tradable-led growth-channel bears resemblance with the literature that stresses the importance of technological capabilities, i.e. non-price competitiveness. The importance of non-price factors can be derived from Thirlwall’s (1979) law according to which growth in an open economy is constrained by the ratio between the growth rate of exports and the income elasticity of demand for imports. The growth rate of exports can be decomposed into the rest of the world’s income elasticity of demand for the home country’s exports and the rate of growth of the rest of the world’s income. Thus, the growth rate depends on two income elasticities, both determined by technological capabilities (McCombie 1989). The more technological capabilities a country has, the more complex and differentiated the products it can produce. More sophisticated goods are characterized by higher income elasticities of demand for exports and lower income elasticity of demand for imports and hence associated with higher growth rates (Gouvêa and Lima 2010). The importance of income elasticities of exports and imports also has a long tradition in economic structuralism (Ocampo and Parra 2006).

Hidalgo and Hausmann (2009) have introduced the economic complexity index (ECI) to quantify the technological capabilities of an economy.<sup>9</sup> Structuralist

<sup>9</sup> The indicator is derived through the export basket. Each export basket is classified according to the ubiquity and diversity of its components—the more diverse and non-ubiquitous its export basket, the higher a country’s ECI.

scholars applied the ECI to vindicate their reasoning on the pivotal role of technological capabilities in fostering economic growth and development via increasing returns to scale and positive externalities (Gala et al. 2018). For DCEs, Gräbner et al. (2020) show the crucial role of technological capabilities and their relation to growth models in explaining the divergences within the Eurozone. They argue that export-led growth models require a certain degree of technological capabilities, while in the absence of these capabilities economies might tend to develop private debt-led growth models.<sup>10</sup> Likewise, the macroeconomic policy regime approach (Hein and Martschin 2021) and the analysis of growth drivers (Kohler and Stockhammer 2022) also suggest the importance of non-price competitiveness for DCEs.

As non-price competitiveness mainly boosts exports it is conducive to export-led growth models. But non-price competitiveness does not necessarily depress private consumption as price competitiveness likely will. Non-price competitiveness can thus also feature in rather domestic demand-led growth models as current account surpluses are not inevitable.

## 2.4 Commodity prices

Price and non-price competitiveness drive manufactured exports. However, ECEs' export basket are often characterized by a large share of commodities. UNCTAD (2021, p. 14) classifies around 55 per cent of ECEs as commodity dependent, meaning their share of commodities in total exports exceeds 60 per cent. For DCEs, this value is only at 28 per cent, justifying the neglect of commodity prices as a potential growth driver for this country group by Kohler and Stockhammer (2022). Commodity prices, with the exception of oil, are essentially demand-driven and follow a cyclical movement over 20–70 years, leading to the notion of 'commodity super-cycles' (Erten and Ocampo 2013). Furthermore, the financialisation of commodities also contributes to commodity prices' cyclicity (Pollin and Heintz 2011). Investigating the effects of these cycles on economic activity, Fernández et al. (2020) find that commodity super cycles play a determining role for aggregate output in small and open DCEs and ECEs.

Besides the positive effects on external demand and income, rising commodity prices might also increase growth through the increased financial resilience of the economy as the rising current account surplus allows for the accumulation of international reserves that can be used to cushion the detrimental effects of financial havoc. Moreover, a favourable development of the terms of trade can allow for increased imports for production purposes (Menezes and Souza 2019). However, if not counteracted, the increased export volume can lead to real appreciation with detrimental effects on manufacturing industries' price competitiveness leading to premature de-industrialization – as described by the concept of 'Dutch disease' (Bresser-Pereira 2008). Furthermore, as stressed by structuralist, reliance on

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<sup>10</sup> However, as we will argue further below, export-led growth models may also be based on commodity prices. Thus export-led growth models from a growth decomposition perspective do not necessarily require non-price (or price) competitiveness.

commodity exports comes with deteriorating terms of trade and adverse effects on the growth trajectory (Ocampo and Parra 2006).

As commodity prices boost export demand, growth driven by commodity prices will likely be export-led. An export-led commodity prices-driven growth model will exhibit different characteristics than export-led models driven by price or non-price competitiveness. If not counteracted rising commodity exports are mutually exclusive to price competitiveness in the short term with detrimental effects for non-price competitiveness in the longer term. Moreover, growth models based on commodity prices will exhibit the cyclical features of these prices and declining terms of trade affect the long-term prospects of growth negatively.<sup>11</sup>

## 2.5 Private debt: financialisation, financial development and cycles

In debt-led private demand growth models in DCEs, like in the US, UK and southern Europe, wealth-based and debt-financed private consumption and residential investment drove demand and growth (Stockhammer 2015).<sup>12</sup> Also ECEs followed debt-led private demand growth models, namely Mexico and Hungary before the GFC, Turkey afterwards, and South Africa in both periods (Akçay et al. 2022, p. 83). But private debt also played a significant role in ECEs where no debt-led private demand growth model was identified. Akçay et al. (2022, p. 89–91) argue that growing private debt contributed to the Chinese growth model becoming less export-led after the GFC. In what follows, we will examine the role of private debt as a growth driver in ECEs distinguishing between household debt, on the one hand, and debt of non-financial corporations (NFCs) on the other. For NFC debt, we distinguish financial sector development conducive to long-term growth from construction booms and debt used for financial activities. Finally, we emphasize the cyclicity of growth driven by private debt in the context of EMEs' subordinate integration into global financial markets.

Financialisation in ECEs has come with increased indebtedness of households. Following the GFC, household debt growth accelerated in several ECEs (Karwowski and Stockhammer 2017, p. 76). Country- or region-specific accounts of this rise can be found in Karwowski (2012) and Ashman et al. (2011) for South Africa; Chang (2016) for South Korea; Rethel (2010) for Malaysia; dos Santos (2013) for Brazil, Mexico, Poland and Turkey; Karacimen (2016) for Turkey; and Gabor (2010) for Central and Eastern Europe. Notwithstanding the variegated manifestations of housing financialisation among ECEs, e.g. in terms of mortgage debt to GDP and homeownership rates (Fernandez and Aalbers 2020), the listed studies and reports

<sup>11</sup> Schedelik et al. (2023) emphasize that commodity price-driven growth models are affected not only by the pro-cyclical behaviour of commodity prices but also, simultaneously, by that of capital flows. In their analysis, Campana et al. (2024) highlight the specific role of commodities in the growth models of Brazil and Russia. Similarly, Passos and Morlin (2022) and Sierra (2022) examine commodity exports as a salient feature of Latin American growth models.

<sup>12</sup> During asset price booms, rising real estate prices increase household wealth, boost residential investment and allow real estate to be collateralized for credit-financed consumption (Stockhammer and Wildauer 2016).

on China (Bird 2020) indicate that the increase in household debt in ECEs is largely driven by housing-related financing needs. Household debt as a growth driver should then come with increased residential investment and rising house prices.

Despite their rise, household debt-to-GDP levels in ECEs are still relatively low compared to those in private debt-led DCEs. The levels of NFC debt in ECEs, however, are much closer to those in DCEs (Karwowski and Stockhammer 2017, pp. 75–76). The growth model literature on DCEs disregards NFC debt for real investment as a potential growth driver. This stems from the depressing effects of financialisation on real corporate investment and an increased use of NFC debt for financial activities and payouts (Davis 2017). Likewise, for some ECEs, studies find rising NFC indebtedness to be associated with heightened involvement of NFCs in financial activities, increased holding of liquid assets and financial payouts at the expense of real investment (Bonizzi 2013, p. 89, for an overview). At the same time, growth model analysis on ECEs indicates that investment demand plays a more prominent role there, leading Mertens et al. (2022) to add the category of an investment-led growth model.

Hence, we take into account the possibility of NFC debt as the base of real investment, thereby driving growth. In general, finance occupies an important position within post-Keynesian economics as creditworthy firms can take out loans, irrespective of prior savings, to finance investment and start production (Lavoie 2014, Chapter 4). Correspondingly, post-Keynesian authors advocate for a financial sector sophisticated enough to provide necessary finance for NFC (Priewe and Herr 2005, Chapter 4). However, this advocacy shall not be mistaken for full-blown financial liberalization which is deemed harmful for growth and development (e.g. Arestis 2006).

Increasing indebtedness in ECEs is hence not necessarily negatively connoted in the context of growth. Rather, one has to distinguish favourable expansion of private debt associated with the built-up of productive capacities from unfavourable expansions. Unfavourable expansions of private debt do not lead to the build-up of productive capacities and include debt-financed household consumption, residential investment and debt-financed financial activities and financial payouts by NFCs.

In all cases, debt expansion follows cyclical dynamics as stressed by Kohler and Stockhammer (2022) by referring to the *Financial Instability Hypothesis* (Minsky 1977). During a boom, asset prices rise, credit expands and financial positions become increasingly risky. This built-up fragility eventually leads to busts marked by falling asset prices, deleveraging and reduced spending. On top of these domestic endogenous dynamics, ECEs' cycles may be characterized by their subordinate integration into financial markets. This subordination stems from the inferior position their currencies occupy in the international currency hierarchy as international investors assign a lower liquidity premium to their currencies compared to key currencies. To attract capital inflows, ECEs must compensate for the lower liquidity premium with higher interest rates, which in turn adversely affect corporate investment (Bortz and Kaltenbrunner 2018). Furthermore, ECEs that rely on capital inflows face the problem of their debt being of short maturity and denominated in foreign currency, making them additionally vulnerable to exchange rate movements (Arestis and Glickman

2002). Concomitant balance sheet effects amplify the amplitude of the business cycle: during the boom, pro-cyclical capital flows to ECEs and exchange rate appreciations increase the net worth of firms with foreign currency denominated debt boosting their investment. Conversely, during the bust, negative balance sheet effects amplify the contraction (Kohler 2019).<sup>13</sup>

Capital flows to ECEs are not only pro-cyclical with respect to their domestic economic activity. They are also partly determined by the decisions of institutional investors in DCEs. Liquidity considerations and global factors, such as the monetary policy in DCEs, lead investors to withdraw or invest capital in ECEs (Bonizzi 2017). The respective cyclical and secular movement in capital flows, asset prices and credit growth has become known as the *global financial cycle* (Rey 2015). In this context, ECEs' capital inflows increase during expansionary and decrease during restrictive US monetary policy stances (Bräuning and Ivashina 2020; Ahmed and Zlate 2014). Otherwise put, financial cycles in financially globally integrated ECEs are not only pro-cyclical with respect to domestic endogenous factors but also to international ones.

The different characteristics of private debt as a growth driver described above have correspondingly different implications for the growth model. Rising NFC debt in the context of financial sector development will boost investment and hence be conducive for a domestic demand-led model. Thereby productive capacities are built up by which price and non-price competitiveness may rise eventually and drive exports. While rising NFC debt for financing financial activities and payouts is expected to have negative effects on demand and growth, debt-financed household consumption and residential investment foster the emergence of a debt-led private demand growth model. If private debt expansion is based on capital inflows, appreciations are likely to occur. This will have detrimental effects on price competitiveness and on non-price competitiveness eventually, as explained in the respective sections. In all cases of private debt-driven growth, cyclicity will prevail. The amplitude of the cycle and its trigger may depend on the type and degree of international financial integration. The severity of the growth downturn during the financial bust will depend on the existence of alternative growth drivers. While the post-GFC period saw growth deceleration in all formerly private debt-driven countries, these were more severe in peripheral Europe where fiscal policy was not utilized to cushion the debt-driven stagnation like it was in the Anglo-Saxon countries (Kohler and Stockhammer 2022; Hein et al. 2021).

## 2.6 Vertical foreign direct investment: tax havens and export platforms

Vertical FDI already featured prominently in the second VoC generation. Nölke and Vliegenthart (2009) coined the term 'dependent market economies' for the CEE

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<sup>13</sup> Additionally to the effects on corporate balance sheets, capital flows to subordinated financially integrated ECEs may fuel household indebtedness, as shown by Kaltenbrunner and Paineira (2018) for the case of Brazil.

countries of Poland, Hungary, the Czech Republic and Slovakia. These economies are embedded into complex manufacturing value chains offering a skilled but relatively cheap labour force. The necessary capital is largely provided by multinational corporations (MNCs) via FDI, making these economies dependent on decisions taken by hierarchically organised foreign corporations.

In the growth models literature, CPE scholars invented the category of ‘FDI-led growth models’ for the CEE countries, the Baltic States and Ireland (Bohle 2018; Bohle and Regan 2021; Regan and Brazys 2018). There, FDI-led growth models are “particular cases of export-oriented growth, because the major exporting firms are foreign-owned” (Bohle and Regan 2021, p. 82). Ownership is hence the key difference between FDI-led growth models and common export-led economies such as Germany. These FDI-led economies grow by attracting FDI that leads to the build-up of productive capacities and consequently to rising external demand for domestically produced goods. The main difference among FDI-led countries being then the sectors to which they receive their FDI (Bohle and Regan 2021). Applying a post-Keynesian perspective, Woodgate (2021, 2023) questions this distinction. According to Woodgate, FDI-led economies not only differ in terms of ownership from export-led economies but also in their national accounts. While both types have positive net exports, FDI-led ones exhibit negative current account balances due to negative net income receipts, leading to GDP exceeding gross national income in these economies.

Woodgate (2021, 2023) proposes two types of FDI-led growth models, *tax havens* and *export platforms*, to understand the impact of FDI on demand, output, national income, and growth in economies with a significant presence of MNCs. Both types are based on the ‘commercialisation of state sovereignty’ (Palan 2002), featuring low effective corporate tax rates, the establishment of special economic zones and investment promotion agencies to attract FDI.<sup>14</sup> *Tax havens* are net recipients of profits shifted within MNCs without receiving much tangible capital nor significant employment. Profit shifting takes place via transfer pricing or intellectual property royalties leading to growing net exports and output without actual value adding activities taking place in the tax haven. National income in these economies grows through MNCs FDI only if part of the income is absorbed through taxation of the shifted profits, which may be reinjected via government expenditure. *Export platforms*, on the other hand, “host foreign affiliates that are engaged in the genuine production of goods and services” (Woodgate 2021, p.8) bringing tangible capital and employment to the host country. Here output grows as foreign affiliates established via FDI produce to service external demand. This creates national income in the form of wages paid to domestic households and taxes paid on the profits of foreign affiliates. Wages and taxes in turn create demand and output as they are consumed, respectively, reinjected into the economy.<sup>15</sup>

<sup>14</sup> Not all countries pursuing such a strategy are necessarily successful in attracting FDI. Those who are benefit from some sort of first mover advantages (Woodgate 2021).

<sup>15</sup> Woodgate (2021, p.9) lists twelve tax havens that “have been found to be a net recipient of shifted profits in the literature” (Macao, British Virgin Islands, Luxembourg, Bermuda, Cayman Islands, Singapore, Ireland, Puerto Rico, Switzerland, Malta, the Netherlands and Hong Kong) and eight export platforms which have at least 40% of their net exports coming from foreign-owned firms (China, Thailand, Malaysia, Slovakia, Estonia, the Czech Republic, Hungary and Sweden).



Hence, FDI will boost net exports and be conducive to an export-led regime, however, the large presence of MNCs and net foreign income receipts may lead to a negative current account. While positive net exports of tax havens are misleading as no true value adding activities take place, export platforms do service external demand. The establishment of productive capacities in export platforms results in investment that may lead to productivity gains and a more diverse and sophisticated export basket, resulting in increased price and non-price competitiveness.

## 2.7 Fiscal policy

In recent years, a consensus on the positive effects of expansionary fiscal policy on macroeconomic performance emerged (Stockhammer et al. 2019, pp. 58–60). This effect is associated with the notion of fiscal multipliers which refer to the increase in output induced by the increase in public spending or decrease in taxation. Not only is there a large amount of literature that finds fiscal multipliers to be larger than one, they also seem to be higher in recessions compared to normal times and upswings (Gechert and Rannenberg 2018). Additionally, fiscal multipliers of public spending are found to be larger than those of taxation, while those of investment tend to exceed those of consumption. Furthermore, multipliers are larger in more closed economies due to fewer demand leakages through imports (Gechert and Rannenberg 2018). For ECEs, studies contend that fiscal multipliers are smaller than for DCEs (Hory 2016; Ilzetzki et al. 2013). Moreover, fiscal consolidation may come with negative hysteresis effects as the reductions in output can have long-term negative effects on the economic performance while fiscal expansion could prevent such effects or even trigger positive ones (DeLong and Summers 2012; Gechert et al. 2019).

A more long-term perspective is taken in a strand of literature that introduces non-capacity generating autonomous demand components into Kaleckian growth models. Allain (2015) uses autonomous government expenditure growth as such a demand component in a basic Kaleckian framework with Harroddian instability. In the medium (and under certain conditions, long) run, it is the growth rate of the autonomous demand component towards which the rate of accumulation converges. Therefore, higher growth rates of government expenditure imply higher rates of growth and accumulation. Amending the model by government debt, Hein (2018) and Hein and Woodgate (2021) show that constant growth rates of government expenditure are under certain conditions compatible with stable public debt to GDP ratios. Kohler and Stockhammer (2022) and Hein and Martschin (2021) have similarly stressed the pivotal role of fiscal policy as a growth driver for DCEs.

Expansionary fiscal policy will boost demand via government consumption and investment, as well as, private demand through social transfers and tax reductions. Hence, expansionary fiscal policy as a growth driver will be conducive to a domestic demand-led regime. Furthermore, public expenditure can have positive supply-side effects. Not only may it prevent negative hysteresis effects but also promote productivity through public investment, leading to higher potential output, price competitiveness, and non-price competitiveness.

According to post-Keynesian and particularly Modern Monetary Theory, fiscal expenditure in monetary sovereign countries is only constrained by potential output (Wray 2019); government debt-to-GDP ratios can remain stable even with primary deficits (Domar 1944; Hein and Martschin 2021). Hence, we contend that the fiscal policy stance is foremost a policy variable that reflects political conflict (Kalecki 1943). However, the conditions of monetary sovereignty, such as issuing a domestic currency, having taxes, government expenditures and public debt denominated in that currency and operating a free floating exchange rate (Wray 2019) do arguably not pertain to ECEs (Epstein 2019). Another possible constraint on expansionary fiscal policy are balance-of-payments problems. These are especially conceivable for ECEs as the financial liabilities they incur associated with current account deficits – e.g. triggered by expansionary fiscal policy leading to import exceeding export demand – are denominated in foreign currency (Bonizzi et al. 2019).

Table 2 summarizes the presented growth drivers, the main demand components they drive, the growth model they are conducive to, further characteristics and which growth drivers are unlikely to occur simultaneously.

### **3 Growth drivers before and after the Global Financial Crisis: an empirical exploration for 19 emerging capitalist economies**

This section sets out an empirical exploration of growth drivers for a set of 19 ECEs which size was constrained by data availability. First, descriptive data for the growth drivers is displayed for the years between 2000 and 2019 to detect salient features in their development over time and cross-regional and -country characteristics. Second, as done by Kohler and Stockhammer (2022), we check via simple linear regressions for the pre- and post-GFC years for cross-country growth drivers.

The trajectory of ECEs in terms of their growth models has been more diverse than that of economies in the core (Akçay et al. 2022; Hein et al. 2021; Kohler and Stockhammer 2022). To make sense of this heterogeneity but also for visualization purposes, we investigate our sample of ECEs in subgroups. For the time being we apply a regional grouping (Asia, Central and Eastern Europe, Latin America and Middle East/Africa) which, as we will see, captures the heterogeneity of some growth drivers better than others. As visible in Fig. 1, the GFC constituted a sharp decline in growth throughout the sample with varying magnitude. Asian countries exhibited on average milder downturns and show the highest growth levels throughout the years while the growth performance in Latin America seems to be the most dismal. The trend of lower growth following the GFC across the sample, is the most pronounced in Latin America. Only Israel, India and Indonesia withstood that trend.<sup>16</sup> Hence, although Fig. 1 displays

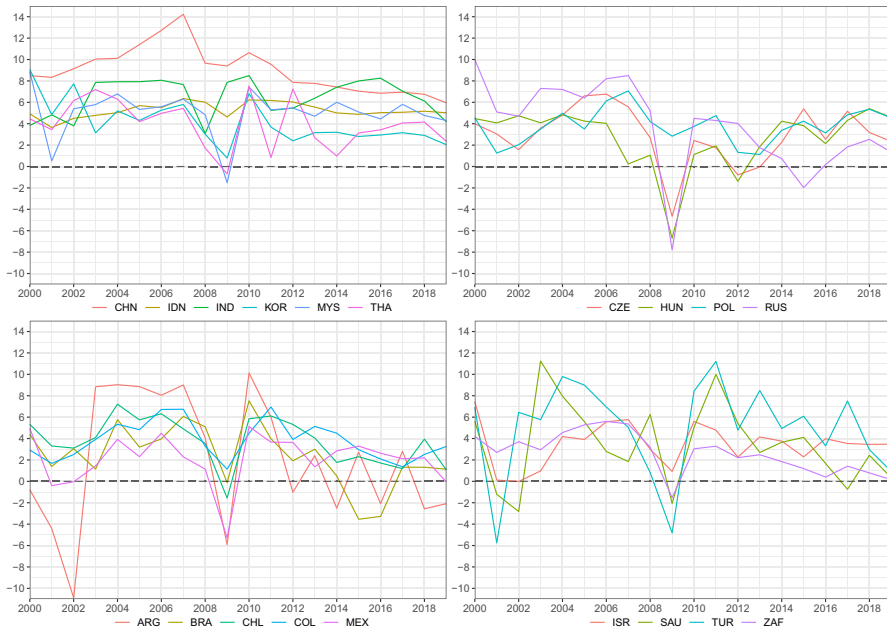
<sup>16</sup> Table A2 in the supplementary material provides an overview on the periodic averages of GDP growth and current account balances for the pre- and post-GFC years.

**Table 2** Overview of growth drivers in ECEs

Growth driver	Main demand component	Growth model	Further characteristics	Unlikely to occur with
Income distribution	Private consumption	Domestic demand-led	Net effect on demand and growth depends on the demand regime	Private debt
Price competitiveness	Exports	Export-led	Negative balance sheet effects, redistribution towards profits	Price competitiveness
Non-price competitiveness	Exports	Export-led	Not necessarily as domestic demand depressing as price competitiveness	Income distribution
Commodity prices	Exports	Export-led	Cyclical behaviour, risk of premature De-industrialization, declining terms of trade	Commodity prices
Private debt	Consumption and investment	financial sector development: Domestic demand-led debt-financed household consumption and residential investment: Debt-led private demand	Financial sector development is conducive for long-term growth; financial boom-bust cycle, which may be marked by subordinated financialisation	Commodity prices
Vertical FDI	Exports and investment	Export-led	Tax havens: rising exports due to profit shifting of MNCs Export platforms: genuine value adding activities which may lead to increases in price and non-price competitiveness Additional demand depends on income absorption which is higher in export platforms	Household debt: rising wage shares and reduced income inequality Accompanied by capital flows: price and non-price competitiveness

Table 2 (continued)

Growth driver	Main demand component	Growth model	Further characteristics	Unlikely to occur with
Fiscal policy	Public consumption and public investment	Domestic demand-led	To a large extent a policy variable; may also boost private demand through social transfers and tax reductions; potentially increasing potential output and measures of competitiveness	

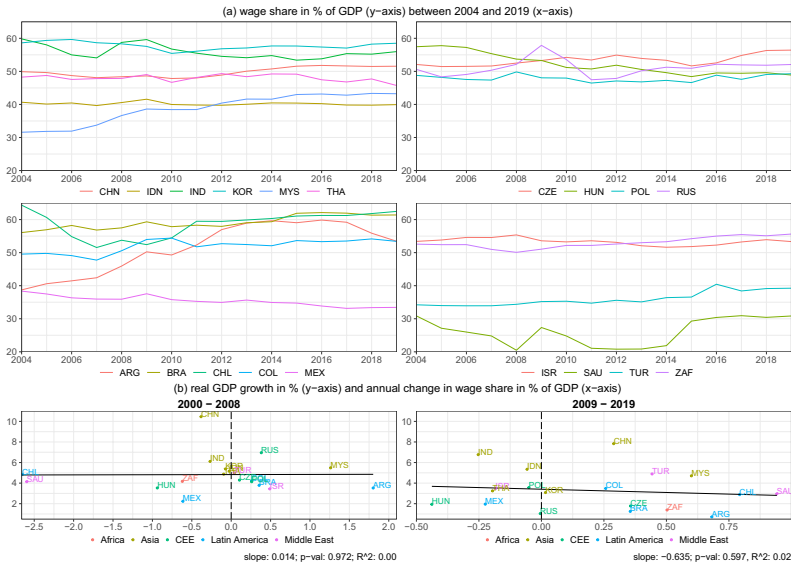


**Fig. 1** GDP growth of 19 ECEs between 2000 and 2019, regionally grouped. Sources: World Bank (2021), author's calculations and presentation. Notes: Information on the empirical indicator and country abbreviations can be found in Table A1

serious heterogeneity in terms of growth deceleration and acceleration, we will use the GFC in what follows as a structural breaking point for the 19 ECEs. Moreover, for several DCEs, the GFC constituted a structural breaking point in growth models: The debt-led private demand boom was followed by a debt-driven stagnation that was not in every country countered by sustained public demand. In consequence, GDP growth in the core slowed down in the years after the crisis (Kohler and Stockhammer 2022; Hein et al. 2021) constituting a drag on foreign demand from the ECEs perspective (Akçay et al. 2022). That said, we do not rule out the possibility of alternative structural breaking points which may differ between countries and we will explicitly consider the end of commodity super cycle around 2014 as an alternative breaking point when assessing commodity prices.

### 3.1 Income distribution: wage share and Gini coefficient of disposable income

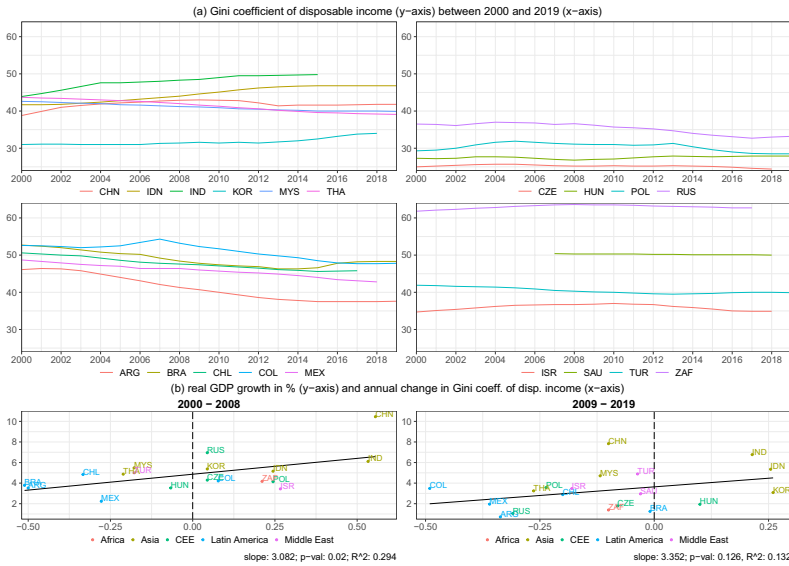
Income distribution as a growth driver is assessed through the wage share in national income and the Gini coefficient of disposable income. Figure 2 a) reveals a striking range, roughly between 20 and 60 percent of GDP, between which the wage share varies within the sample. Cross-country differences appear more pronounced within than between regions. Regarding the development over time,



**Fig. 2** Wage shares and GDP growth for 19 ECEs between 2004 and 2019. Sources: World Bank (2021) and ILO (2023); author’s calculations and presentation. Notes: Information on the empirical indicator and country abbreviations can be found in Table A1

most ECEs do not exhibit remarkable level changes in their wage share. Notable is the pronounced increase of the wage share in Argentina until 2017 and the steady increase witnessed in Malaysia. Looking at the bivariate coefficients in panel b) of Fig. 2, we see no cross-country relation between changes in the wage share and growth, as indicated by the flat line and insignificant coefficient. In the post-GFC period, the slope of the line becomes negative implying that countries with falling wage shares tended to grow faster. However, the coefficient is highly insignificant.

Figure 3 presents the development of the Gini coefficient for disposable income, a measure for the personal distribution of income. The coefficient can take values between zero and 100, with zero implying a perfectly equal distribution and 100 implying that all income accrues to one person. With the exception of the Middle Eastern/African subgroup, there appears to be some homogeneity within the regions. The CEE countries exhibit on average the lowest Gini coefficient, i.e. the most equal distribution. While the Latin American countries started at comparatively high levels, there is a trend of declining inequality visible in all these countries until around 2015. In panel b) of Fig. 3, we see a positive relation between the Gini and growth for the pre-GFC period that is significant at the 5% level, implying that countries have grown faster the more their income inequality increased. In the post-GFC period, the coefficient stays positive without reaching the 10% significance level. As such a relationship is not suggested by economic theory, we view this rather as a result of endogeneity or reversed causality that will not further be considered.

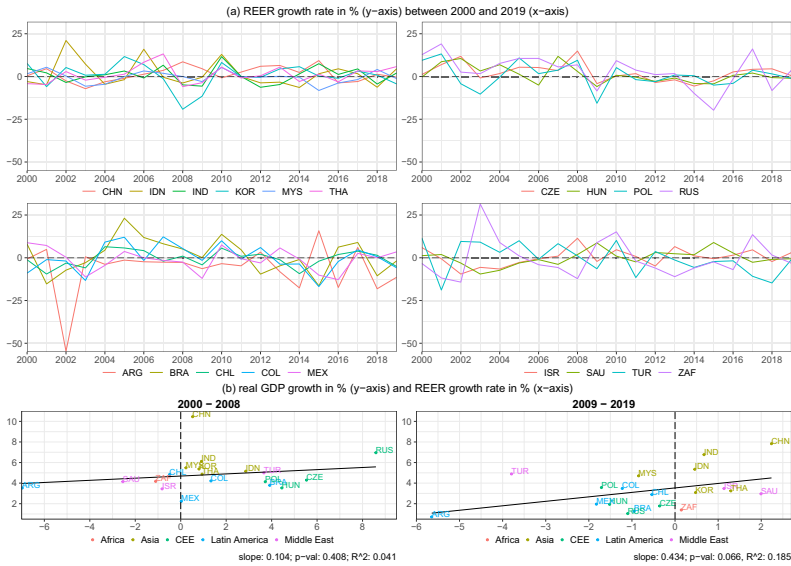


**Fig. 3** Gini coefficient of disposable income and GDP growth for 19 ECEs between 2000 and 2019. Sources: World Bank (2021) and Solt (2020); author’s calculations and presentation. Notes: For the pre-GFC simple linear regression Saudi Arabia was excluded due to insufficient data. Information on the empirical indicator and country abbreviations can be found in Table A1

### 3.2 Price and non-price competitiveness

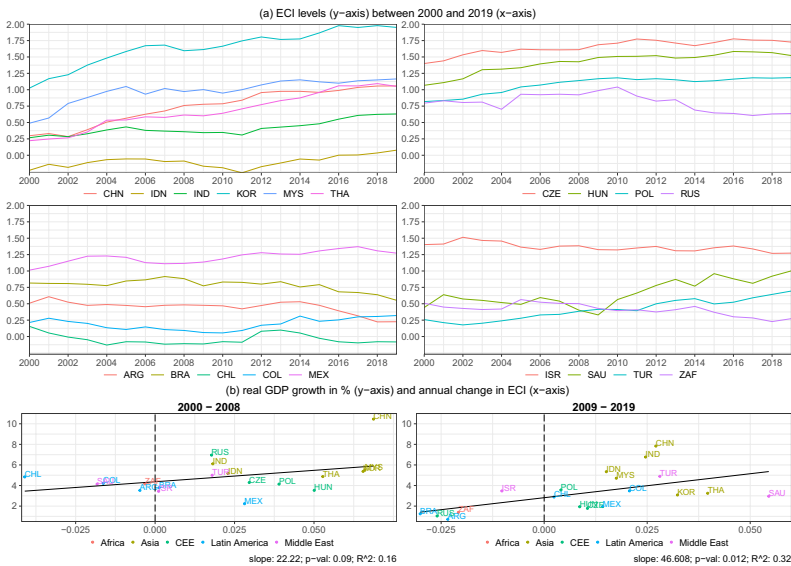
Price competitiveness is proxied via the real effective exchange rate (REER), defined as the price of a domestic consumption basket relative to a weighted consumption basket of trading partners. Following the Bank for International Settlements (BIS), an increase (decrease) in the REER refers to a real appreciation (depreciation) and is associated with a decrease (increase) in international price competitiveness. Visible in Fig. 4 panel a), all ECEs experienced periods of real appreciations and depreciations, which differ in their extent. On average, the volatility of the REER seems less pronounced in Asia and the CEE countries. Notably, the volatility in both regions decreased in the years after the GFC. An exception to this is Russia, which experienced comparatively marked REER volatility throughout the years. Such volatile REERs can also be witnessed in the Latin American subgroup, in South Africa and to a lesser extent in the Middle Eastern countries. Prior to the GFC, shown in panel b) of Fig. 4, real appreciations were more prevalent and the relationship between the REER and growth was positive, i.e. appreciations and losses in price competitiveness were associated with higher growth. After the GFC, a slight majority experienced depreciations, particularly the Latin American and CEE countries. Hence, the CEE countries with the exception of Russia, were not only able to reduce the volatility of their REER but also to achieve on average increases in price competitiveness throughout the post-GFC years. In Asia, all countries except Malaysia, experienced real appreciations. The positive relationship between growth and real appreciations prevailed after the GFC, becoming even more pronounced and significant.





**Fig. 4** REER and GDP growth for 19 ECEs between 2000 and 2019. Sources: World Bank (2021) and BIS (2021b); author’s calculations and presentation. Notes: Information on the empirical indicator and country abbreviations can be found in Table A1

Non-price competitiveness is assessed using the ECI – a higher ECI implies higher non-price competitiveness. Comparing the ECI levels in panel a) of Fig. 5, we see that the CEE countries, with the exception of Russia, are found in the higher ranks with an



**Fig. 5** ECI and GDP growth for 19 ECEs between 2000 and 2019. Sources: World Bank (2021) and OEC (2021); author’s calculations and presentation. Notes: Information on the empirical indicator and country abbreviations can be found in Table A1

improving trend. The Asian and Latin America countries exhibit heterogeneity in terms of the ECI level but similar trends. Although to varying degrees, all Asian countries were able to increase their non-price competitiveness. In Latin America, only Mexico and to a lesser extent Colombia were able to do so. Notably, Saudi Arabia exhibited a significant increase in its ECI in the years following the GFC, especially, as other countries marked by a high share of commodity exports, Brazil, Chile and Russia, experienced decreasing non-price competitiveness. Looking at panel b) which relates the annual changes in the ECI to growth, we see that Asian and CEE countries exhibited more dynamism in improving their ECI. In both periods, we observe a positive and significant bivariate coefficient. The significance in the pre-GFC sample however hinges on China. In the post-GFC years the coefficient increases and becomes more significant.

### 3.3 Commodity export price index

Figure 6 illustrates the recent commodity super cycle which started around 1999. Until the GFC, real energy and metal prices increased by over 100% and those of food by 75%. After a short setback due to the GFC, commodity prices continued their upwards trajectory until the end of 2014. Traded on world markets, countries face the same commodity export and import prices. How commodity prices affect a country's demand and growth will depend among other factors on the share of commodity exports in a country's GDP. Therefore, we will assess the role of commodity prices in driving ECEs growth via a commodity export price index (CEPI) provided by the IMF that weighs a country's export commodities' prices according to their share in the country's GDP (Gruss and Kebhaj 2019) – i.e. the CEPI growth rate is higher for the country with a higher share of that commodity in its GDP. The pronounced variation in CEPI growth rates reflects the diverse degrees of commodity exports to GDP. Therefore, we present the CEPI growth rates with slight variation: The bottom right quadrant in panel a) of Fig. 7 groups those five countries with significant higher CEPI growth rates, i.e. the most commodity export reliant countries in our sample: Chile, Indonesia, Malaysia, Russia and Saudi Arabia. In all countries, the development of the individual CEPI growth rates resembles the commodity super cycle. With the structural break in this growth driver being so apparent, we deviate from the GFC periodization for assessing the bivariate cross-country coefficient and instead choose 2000–2014 as our first period in line with the commodity super cycle. Furthermore, we excluded India and China from the sample as it is suggested that their growth considerably drives commodity prices (Erten and Ocampo 2013). The bivariate coefficients are positive and insignificant in both periods (panel b) Fig. 7).

### 3.4 Finance: corporate and household debt

To assess the role of private debt as a growth driver, we look at the development of private sector debt, i.e. the sum of household and NFC debt, as a percentage

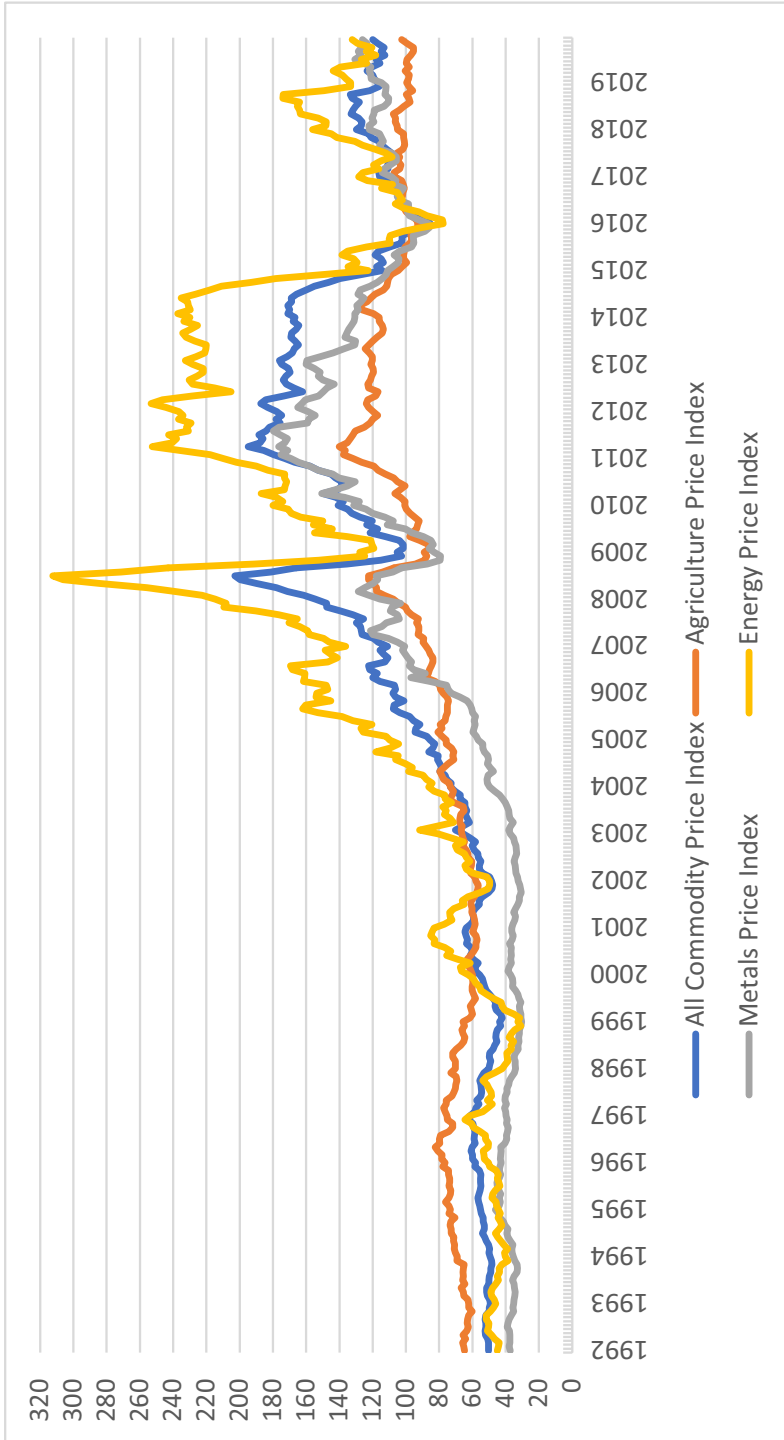
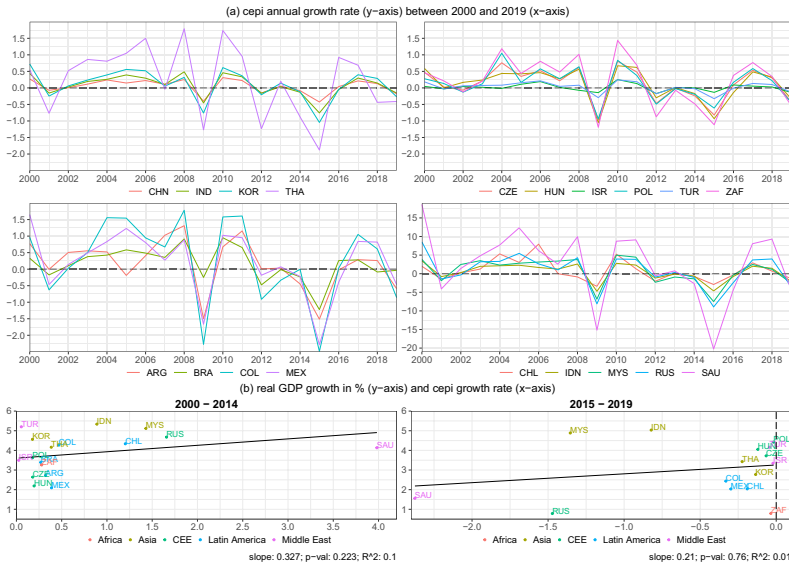
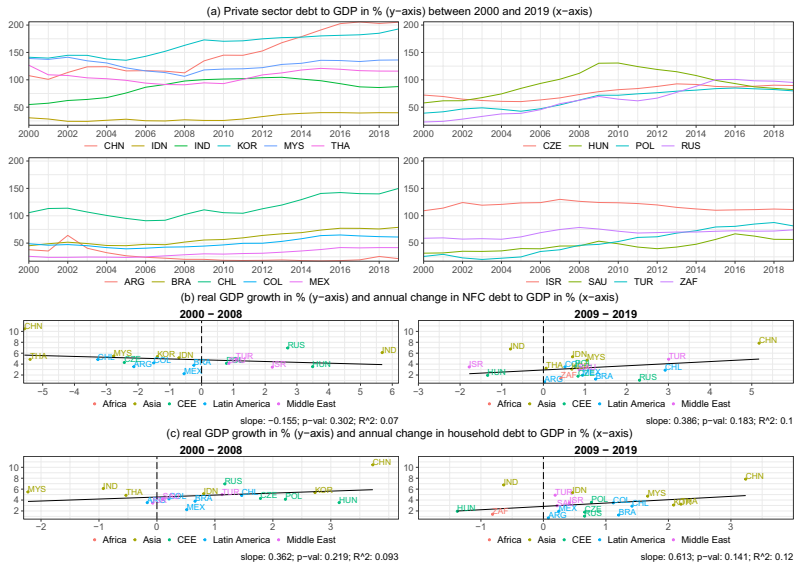


Fig. 6 Monthly commodity price indices (2016 = 100), 1992–2019. Sources: IMF (2021a); author's presentation



**Fig. 7** CEPI and GDP growth for 19 ECEs between 2000 and 2019. Sources: World Bank (2021) and IMF (2021a); author’s calculations and presentation. Notes: Information on the empirical indicator and country abbreviations can be found in Table A1

of GDP. As elaborated in 2.5, this is a very broad measure that may be driven by various factors with diverse effects on growth, e.g. financialisation processes or financial development. Furthermore, the evolution of private debt is endogenous to the development of growth. Hence, this examination is only a first step towards a more sophisticated analysis of finance growth drivers in ECEs. Panel a) of Fig. 8 shows that the cyclicity varies among the countries in terms of the magnitude and breaking points. In some countries the years around the GFC constitute a breaking point. A case in point is China which saw a significant increase in its private debt level in the years following the GFC, rendering it the country with the highest private debt level in the sample. Despite the high degree of variety within the Asian region, it has arguably the highest private debt levels. The CEE countries exhibit a rather steady increase, with Hungary and its pronounced financial cycle, which reversed after the GFC, being the exception. For the Latin American countries, Chile is that exception, exhibiting similarities to the Chinese trajectory albeit at a lower level. Looking at the bivariate coefficients, where we have separated NFC debt from that of households, we see in panel b) that deleveraging was slightly more prevalent in the pre-GFC years. After the GFC, however, a clear majority saw increasing NFC debt. In the post-GFC period, the bivariate coefficient for NFC debt turns positive however not reaching the 10% level of significance. Panel c) relates the annual change in household debt to growth. The bivariate coefficient becomes more positive in the post-GFC years. While it also increases its significance, it does not reach the 10% level either.



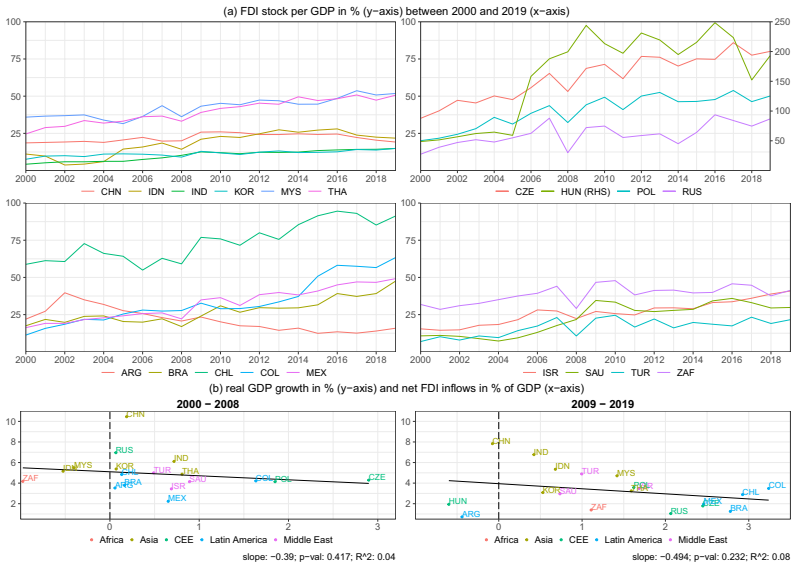
**Fig. 8** Private debt and GDP growth for 19 ECEs between 2000 and 2019. Sources: World Bank (2021) and BIS (2021a); author’s calculations and presentation. Notes: In the pre-GFC period simple linear regression, South Africa was excluded due to insufficient data. Information on the empirical indicator and country abbreviations can be found in Table A1

### 3.5 Foreign direct investment

Looking at the development of the FDI stock since 2000 in panel a) of Fig. 9, we see a rising trend with only few exceptions. The Asian countries are marked by comparatively low to medium/high levels of FDI stock that has developed rather steady. The Middle Eastern and African countries are similar in terms of the level and trend however in a less stable way. Among the CEE countries, we find with the Czech Republic but especially Hungary two countries with the highest level of FDI stock. Notably, the high level of FDI stock in Hungary was largely built up between 2005 and 2009 and plateaued more or less after the GFC. For the Latin American countries we see a similar pattern as with private debt as Chile exhibits the largest stock of FDI, which growth significantly accelerated after the GFC. In all Latin American countries with the exception of Argentina, FDI shows a continuous increasing trend. The bivariate coefficients in panel b) relating the FDI inflows to growth are negative and insignificant in both periods.

### 3.6 Fiscal policy: government structural balance

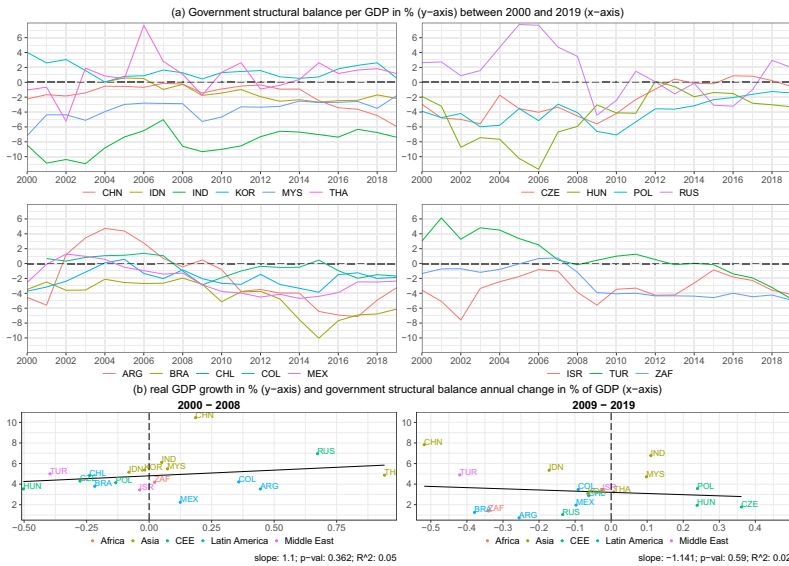
The assessment of fiscal policy as a growth driver is associated with some issues. Important parameters of fiscal policy like government expenditures, tax revenue and the resulting government balance are highly endogenous with respect to growth



**Fig. 9** FDI and GDP growth for 19 ECEs between 2000 and 2019. Sources: World Bank (2021) and Lane and Milesi-Ferretti (2018); author’s calculations and presentation. Notes: In the pre-GFC period simple linear regression, Hungary was included as an extreme outlier. Information on the empirical indicator and country abbreviations can be found in Table A1

and economic activity. To avoid this problem, the structural government balance is employed which tries to filter out the cyclical and endogenous elements of the government balance. The more negative (positive) the structural government balance, the more expansionary (contractionary) the fiscal policy stance.<sup>17</sup> The four quadrants in panel a) of Fig. 10 suggest that the GFC constitute some form of breaking point in terms of the fiscal policy stance. For the Asian countries this is not as apparent as the levels and the trends are rather heterogeneous. The CEE countries exhibit with some variation a trend of improving structural government balances, i.e. a trend towards more contractionary fiscal policy. In the Latin American countries, the GFC separates two distinctive periods, the former one exhibiting higher structural balances and improving tendencies and the latter period a lower level and downward trend – this development is most pronounced in Brazil and Argentina. For the Middle East and African countries, the GFC was followed by lower structural government balances. Notably, 2015 constituted a breaking point for Israel and Turkey after which the structural government balances fell considerably.

<sup>17</sup> The determination of the cyclical and structural elements of the government balance involves various estimations which have become a centre of discussion. Current estimation methods have been accused to underestimate the potential output and output gap. This would then label fiscal policy more expansionary than it actually is (see e.g. Heimberger and Kapeller 2017). By choosing the annual change in the structural government balance we try to avoid at least the estimation issues in terms of the level (Hein and Martschin 2021).



**Fig. 10** Government structural balance and GDP growth for 19 ECEs between 2000 and 2019. Sources: World Bank (2021) and IMF (2021b); author’s calculations and presentation. Notes: Information on the empirical indicator and country abbreviations can be found in Table A1

The simple linear regressions in panel b) of Fig. 10 emphasize the descriptive finding that fiscal policy became overall more expansionary after the GFC. Relating the fiscal policy stance to growth, in the pre-GFC period, higher structural balances, i.e. more contractionary fiscal policy, were associated with higher growth. This relationship reversed after the GFC. However, both cases lack significance.

#### 4 ECEs growth drivers: heterogeneity, possible country clusters and their relation to international growth models

Before further assessing our results, some caveats regarding the methodology, in particular, the bivariate coefficients should be recalled. First, we do establish coefficients that, at best, signify correlation. Correlations are not causalities, however, for causalities to exist there have to be correlations. Furthermore, we derive cross-country coefficients. The absence of a cross-country correlation does not necessarily indicate that this indicator was irrelevant for each country. Instead, it may suggest heterogeneity among countries – e.g. in terms of financialisation (Karwowski 2020) or growth model (Akçay et al. 2022). Moreover, the very nature of some growth drivers prohibits that they drive growth on a cross-country level. Commodity prices for example rise in a secular way, their net effect on growth however does not only depend on the importance of commodity exports for a country’s overall demand but also on the negative demand effects that higher commodity prices might have. Similarly, price competitiveness and the wage share can hardly become cross-country drivers as the net effect of increased price competitiveness, respectively, higher profit



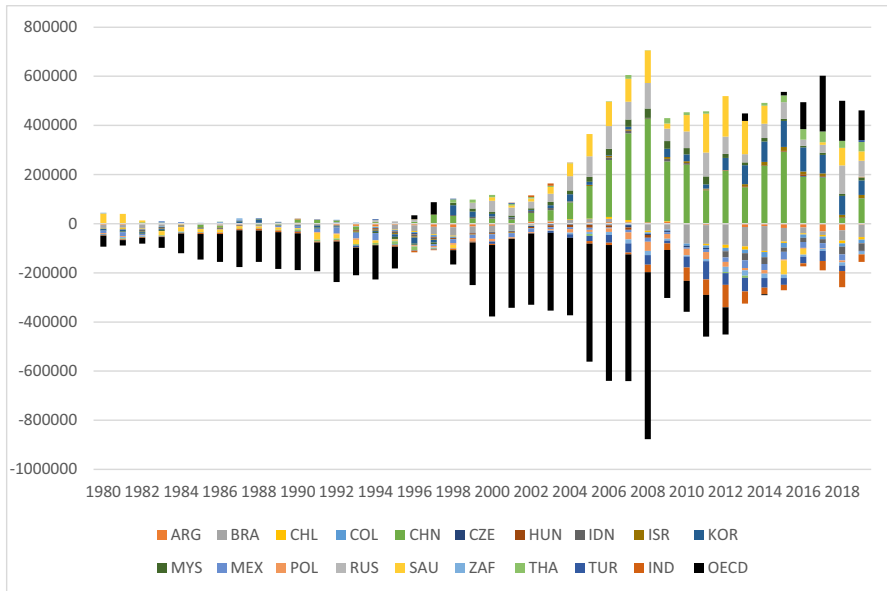
shares varies among countries (Table 1). A further problem concerning the estimation of growth drivers is that of endogeneity as GDP growth affects itself various growth drivers. Going forward, this should be addressed by choosing variables that are more exogenous to demand and growth or by employing more sophisticated methods, e.g. via lagged or instrument variables.

Albeit these problems, some conclusions can be drawn from our empirical exploration. Our results indicate that non-price competitiveness drove growth across ECEs, particularly in the post-GFC period (Fig. 5). This is in line with the literature on economic complexity (Hidalgo and Hausmann 2009), Thirlwall's (1979) law, and economic structuralism (Ocampo and Parra 2006) and resembles the results for DCEs (Gräbner et al. 2020; Hein and Martschin 2021; Kohler and Stockhammer 2022). Hence, our results underscore the importance, as highlighted by Kohler and Stockhammer (2022), of expanding the notion of competitiveness beyond price factors in the Comparative and International Political Economy literature, even for ECEs. Especially, as we likewise fail to find a cross-country role of price competitiveness.<sup>18</sup>

Although lacking significance, the increased importance of expansionary fiscal policy and private debt as growth drivers for the post-GFC years is noteworthy. This is accompanied by overall increased private debt levels and a more expansionary fiscal policy stance (Fig. 8 and 10). The indications of private debt and expansionary fiscal policy becoming more relevant in driving ECEs' growth following the GFC can be viewed as a consequence of developments in DCEs. ECEs are to a considerable extent subject to DCEs and their growth models, especially, in terms of external demand that determines the feasibility of export-led growth models in ECEs. With DCEs reducing their imports and developing increasingly export-led growth models due to austerity policies and private deleveraging (Hein et al. 2021; Kohler and Stockhammer 2022) the increased importance of private debt and fiscal policy constitutes a form of compensation for this loss in external demand. In consequence, growth models in ECEs became rather domestic demand or even private debt-led (Akçay et al. 2022) accompanied by a rise in importance of the respective growth drivers (Table 2). This development is evident in the current accounts, with ECEs showing a tendency of worsening and DCEs one of improvement, as it is shown in Fig. 11. Not only did the aggregated current account deficit of DCEs shrink after the GFC, it became roughly balanced since 2013 and turned into a surplus in 2016.

Despite these tendencies, our results for robust cross-country growth drivers remain sparse. As mentioned, this can be attributed in part to the heterogeneity among ECEs, for example, in terms of their growth models and their respective drivers (Table 2). We have seen that our regional grouping was able to sort at

<sup>18</sup> In contrast, we find a positive relation between real appreciations and growth. This may simply be due to reversed causality, i.e. growth leading to real appreciations. On the other hand, it may signal the negative effects associated with real depreciations, especially, in the light of progressed financialisation and foreign currency denominated debt (McCauley et al. 2015). Moreover, import dependencies may narrow the possible gains from depreciations.



**Fig. 11** Current account balances in current million US\$ of 19 ECEs and OECD member states, 1980–2019. Sources: World Bank (2021); author’s calculations and presentation. Notes: OECD member states as of June 2021 excluding the member countries that are part of our sample. Information on the empirical indicator and country abbreviations can be found in Table A1

least some of the heterogeneity in the descriptive data. The Asian group is marked by comparatively high growth rates, more stable REERs, higher and rising ECI levels and high private debt levels. The Latin American countries exhibit comparatively low growth rates, high levels of income inequality but with a downward trend, rather unstable REERs and a relatively expansionary fiscal policy stance, especially after the GFC. The heterogeneity among the Middle Eastern and African countries are too pronounced. The CEE countries, often with the exception of Russia, exhibit medium to high growth rates and comparatively low levels of income inequality. Moreover, their REERs are rather stable, particularly, after the GFC when they achieved overall depreciations while their fiscal policy stance became less expansionary at the same time. Finally, their ECI levels and FDI stock is rather high.

It is noteworthy that, apart from Russia, the CEE countries not only share similarities in the descriptive statistics of growth drivers, but also resemble each other in the development of their growth models, following the path of many other European DCEs to become or remain export-led after the GFC (Dodig et al. 2016; Hein et al. 2021). At the same time, these countries were already subsumed in the ‘dependent market economies’ category within the second VoC generation (Nölke and Vliegthart 2009). This suggest that growth drivers will not only be similar within the same growth models but should also be studied through the critically retention of institutionalist aspects from earlier VoC contributions as proposed by Schedelik et al. (2021) and implied by Stockhammer and Kohler (2022).

## 5 Conclusions

In this paper, we expanded the concept of growth drivers to ECEs. On a conceptual level, we made the case for a synthesis of growth drivers with a growth model operationalization based on GDP growth contributions and financial sector balances. Building on post-Keynesian and structuralist economics as well as empirical studies on ECEs, seven growth drivers for ECEs were reviewed: income distribution, price and non-price competitiveness, commodity prices, private debt, FDI and fiscal policy. In an empirical exploration we have presented descriptive data for seven growth drivers of 19 ECEs between 2000 and 2019. We find that the Asian ECEs exhibit on average higher growth rates, stable REERs, higher and rising non-price competitiveness and high private debt levels. In Latin America, we find comparatively low growth rates, high levels of income inequality that are abating, unstable RERs and relatively expansionary fiscal stances after the GFC. The CEE countries, often with the exception of Russia, exhibit medium to high growth rates, comparatively low levels of income inequality, high non-price competitiveness and a high FDI stock. Moreover, their RERs were rather stable, particularly, after the GFC when they achieved overall depreciations while their fiscal policy stance became less expansionary.

Furthermore, we assessed which growth drivers determined growth on a cross-country level. To that end, we established bivariate coefficients. In that regard robust results remained sparse. The only robust and significant exception concerns non-price competitiveness which we found to be a cross-country growth driver for ECEs. Furthermore, we find indications of private debt and expansionary fiscal policy becoming more important in driving growth in ECEs after the GFC. This increase in importance is in line with the emergence and continuation of domestic demand- and private debt-led growth models in ECEs following the GFC (Akçay et al. 2022). In this context, the increased importance of private debt and expansionary fiscal policy in driving ECEs' growth can be viewed as a form of compensation for reduced external demand from DCEs in the course of private deleveraging and austerity policies after the GFC (Hein et al. 2021; Kohler and Stockhammer 2022).

Several issues remain regarding the empirical investigation of growth drivers, namely, the problem of endogeneity with respect to growth and the heterogeneity among ECEs. Going forward, building on our results, growth drivers should be examined through more sophisticated methods dealing with endogeneity issues while the problem of heterogeneity could be addressed through adequate grouping, e.g. along the lines of growth models (Akçay et al. 2022) or institutional configurations (Schedelik et al. 2021). Finally, while we have proposed that growth driver analysis can inform growth model analysis using common growth model categories, one may extend this synthesis to further categories and methodologies – for instance, the investment-led growth model (Mertens et al. 2022) and the growth decomposition based on the Sraffian supermultiplier (Campana et al. 2024; Morlin et al. 2022; Passos and Morlin 2022).

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## Declarations

**Conflict of interest** The author reports no conflict of interest.

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