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Growth drivers in emerging capitalist economies before and after the Global Financial Crisis

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Abstract: This paper contributes to the ongoing growth models (GMs) debate by investigating the growth drivers of emerging capitalist economies (ECEs) in the periods before (2000-2008) and after (2009-2019) the Global Financial Crisis (GFC). By drawing mostly on post-Keynesian economics, six growth drivers are considered: Finance, i.e., household debt; changes in income distribution; price and non-price competitiveness, as well as commodity prices; and finally, fiscal policy. By conducting cross-country simple and multiple linear regressions to explain the growth of 19 ECEs in both periods, we find that post-GFC growth was driven by non-price factors while price competitiveness played a role in neither period. Likewise, commodity prices did not drive growth either. In terms of distribution, our results indicate that cross-country growth was driven by rising income inequality in both periods; however, this relation lacks significance. In the post-crisis period, growth was associated with rising profit shares. While this relation also lacks significance, it has to be assessed against various possibilities for seemingly profit-led growth. Finally, with household debt accelerating and fiscal policy becoming more expansionary after the crisis, our results indicate a potentially more prominent role for these factors in driving post-crisis growth, however, this finding lacks robustness. We argue that the sparse robust findings result from ECEs' heterogeneity, particularly in terms of their growth models and subordinated financialization.

Key words: growth model, growth driver, financialization, emerging capitalist economies, post-Keynesian economics,

JEL codes: E11, E12, E65, F62, F65

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1 Introduction

Following the Global Financial Crisis (GFC) of 2007-09, the extreme divergence of growth models (GMs)¹ within developed capitalist economies (DCEs) that preceded it – debt-led on the one hand and export-led on the other (Dodig et al., 2016) – has ceased to exist. Faced with the need for private deleveraging, formerly debt-led economies have changed their GM: They have either become domestic demand-led stabilized by public deficits as in the cases of the US and UK or rather export-led as in the cases of Spain, Italy and Greece where demand compensation via public deficits was not possible due to fiscal constraints and austerity policies (Hein et al., 2021). Commenced by Baccaro and Pontusson (2016), this GM-approach is now increasingly applied within the Comparative Political Economy literature, thereby marking a shift within this discipline from New Consensus Macroeconomics with supply-side determined long-run equilibria to the use of post-Keynesian based demand-focused approaches.² Lately, scholars have attempted to extend the GM-approach to emerging capitalist economies (ECEs)³: Schedelik et al. (2021) link the work on the types of capitalism in ECEs to the respective GMs of these countries. Types of capitalism assigned to ECEs range from ‘state-permeated capitalism’ (China and India), ‘dependent market economies’ (Central Eastern Europe), ‘patrimonial capitalism’ (Russia) and ‘hierarchical market economies’ (mostly in Latin America). Linking these types of capitalism with ECEs’ GMs, Schedelik et al. (2021) argue that ECEs might be able to switch their GM and maintain their type of capitalism (China) while in other instances changes and ambiguities in the type of capitalism are conducive to a change in the GM (Brazil). Focusing on the macroeconomic aspects, Akcay et al. (2021) investigate eight large ECEs’ GMs before and after the GFC against the background of their degree of financialization and distributional developments. While financialization has become more entrenched in these ECEs after the GFC, distributional developments were rather heterogeneous. In this setting, after the crisis, debt-led GMs have not ceased to exist among ECEs but rather prevailed in Turkey and South Africa. Meanwhile, India has maintained its domestic demand-led GM characterized by current account and public deficits; Argentina and Brazil, both formerly export-led, have also turned domestic demand-led; while China, though still export-led, saw a decrease in the relative importance of its exports’ growth contribution. Thus, ECEs have not followed the post-GFC trajectory of DCEs in abandoning debt-led GMs and turning more export-led, and have thus provided the necessary

¹ Within the GM-approach, economies are classified according to their demand and financial resources by looking at the different demand components, their growth contributions and the sectoral financial balances. In some cases, the terms ‘demand regime’ or ‘macroeconomic regime’ are used (see for instance Akcay et al., 2021; Hein & Mundt, 2012). We will use these terms interchangeably. 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 2.2 and works at a different level of analysis.

² For applications of the GM-approach within Comparative Political Economy see e.g. Hall (2018) and Johnston & Regan (2018). Stockhammer (2021) provides an overview on the post-Keynesian fundamentals of the GM-approach.

³ Generally, the term ECE 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.

counterpart to export-led DCE mercantilist economies with high current account surpluses by accepting (rising) current account deficits. However, to some extent, DCEs and ECEs share a post-GFC orientation towards domestic demand-led GMs stabilized by public deficits.

A different approach is applied by Kohler and Stockhammer (2021): Instead of classifying GMs based on growth contributions, they investigate the relevance of four growth drivers, “which are factors that are hypothesized to cause changes in the components of aggregate income” (Kohler & Stockhammer, 2021, p. 2) of 30 OECD countries before and after the GFC. Kohler and Stockhammer consider finance in the form of household debt and housing prices, competitiveness in terms of price and non-price factors and fiscal policy as possible growth drivers. In sum, their results suggest that: “(i) house prices are a strong but cyclical driver of growth and thus periodically turn debt-led growth into debt-driven stagnation; (ii) discretionary fiscal spending has become an important growth driver after the GFC; and (iii) price competitiveness has failed to stimulate growth through foreign demand” (Kohler & Stockhammer, 2021, p. 3). They maintain that the dichotomy of export-led versus consumption-led GMs has lost its usefulness and the formerly debt-led GMs “underwent a debt- and austerity-driven depression, whereas most previously export-led models failed to generate sustained growth through exports” (2021, p.3).

Acknowledging the merit of looking into growth drivers, this paper seeks to deepen the understanding of the trajectories of ECEs after the GFC by applying the approach of Kohler and Stockhammer (2021) to a sample of 19 ECEs.⁴ We seek to identify the growth drivers in these ECEs before and after the GFC. To that end, we consider the drivers suggested by Kohler and Stockhammer (2021) taking into account ECE specificities and adding two, namely, income distribution and commodity prices. First, *finance* is considered by looking at household debt in ECEs in the context of their *variegated* (Karwowski, 2020) and *subordinated financialization* (Kaltenbrunner & Paineira, 2018) amidst *global financial cycles* (Rey, 2015). Second, in contrast to Kohler and Stockhammer (2021), we consider changes in *income distribution* as a possible further driver based on the distinction between wage- and profit-led demand in post-Keynesian economics (Bhaduri & Marglin, 1990). Income distribution relates to finance as a growth driver as the increased debt-driven demand and growth characteristics of financialized economies compensate the loss in demand resulting from rising profit shares and increased wage inequality in otherwise wage-led economies (Hein, 2014, Chapter 10) – which may then even appear profit-led (Kapeller & Schütz, 2015). Truly profit-led economies, on the other hand, may foster their growth via increased international *price competitiveness*, the third driver considered. Besides fostering net exports, real depreciations are thought to be potentially able to enhance economic

⁴ The sample comprises countries that are commonly labelled as ECEs or similar. The selection was ultimately restricted by data availability, particularly in terms of financial indicators. 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.

growth through increased activity in modern tradeable sectors and by averting overvalued exchange rates (Rapetti, 2020). We further take into account *non-price competitiveness*, i.e. the technological capabilities of a country that have been found to closely correspond to its income (Hidalgo & Hausmann, 2009), thereby, resonating with the reasoning based on Thirlwall's (1979) law and economic structuralism (Ocampo & Parra, 2006). Fifth, we consider *commodity prices* as a further possible driver for external demand and growth, particularly in the context of their latest 'super cycle' that started at the onset of this century (Erten & Ocampo, 2013). Finally, *fiscal policy* is considered as a growth driver which is said to be especially efficient in generating multiplier effects during economic slowdowns (Gechert & Rannenberg, 2018). The role of fiscal policy is further assessed by making use of the literature on autonomous demand-driven growth (Allain, 2015). Following Kohler and Stockhammer (2021), we assess the relevance of these growth drivers for the pre- and post-GFC period in a cross-country analysis of 19 ECEs by comparing their bivariate correlations with national growth. Furthermore, multiple linear regressions are run to buttress the findings of the simple regressions. This methodology is straightforward but comes with some caveats, particularly, it only at best establishes cross-country correlations which do not necessarily constitute causalities while their absence may signify heterogeneity within the sample rather than the growth drivers' insignificance for every country.

We see that ECEs grew slower after the GFC with a trend towards worsening current account balances. In terms of robust cross-country growth drivers, our results are sparse with the exception of non-price competitiveness, which particularly drove growth in the post-crisis period whereas there are no indications of price competitiveness and commodity prices driving growth in either period. The absence of price competitiveness as a cross-country growth driver is particularly remarkable against some indications of growth being accompanied by increasing income inequality during both periods and with falling wage shares in the post-crisis years. Against the overall further entrenchment of financialization in ECEs in terms of rising household debt, there are indications that growth has in the post-GFC period become more dependent on rising household debt, especially, in the years before 2014 when ECEs experienced pronounced capital inflows fuelled by loose US monetary policy. Similarly, fiscal policy turned more expansionary in these countries following the GFC but without becoming a robust cross-country growth driver. We argue that the absence of robust cross-country growth drivers among ECEs reflects their heterogeneity, for instance, in terms of their 'variegated' financialization (Karwowski, 2020) and GMs (Akçay et al., 2021). Thus, our mixed results emphasize the need of some sort of classification beyond growth drivers.

The remainder is structured as follows: Section 2 reviews the literature on the six growth drivers. Section 3 presents the descriptive data on the 19 ECEs and the conducted simple linear regressions. Section 4 contains the econometric test of a multiple linear regression. Section 5 summarizes and discusses the results and relates them to the adjacent literature. Section 6 concludes.

2 Growth drivers: Finance, income distribution, competitiveness, commodity prices and fiscal policy

This section reviews six possible growth drivers. Whenever appropriate, ECE-specificities are taken into account. First, finance is considered by looking at household debt in the ECEs considered in the context of subordinate and variegated financialization within global financial cycles. Second, unlike Kohler and Stockhammer (2021), we consider income distribution as a growth driver reviewing the distinction between wage-led and (seemingly) profit-led demand. Third, the literature on price competitiveness as a growth driver is reviewed while non-price competitiveness constitutes the fourth growth driver. Fifth, in contrast to Kohler and Stockhammer (2021), we look at commodity prices and the super cycles they follow. Finally, fiscal policy and its growth effects are considered through the literature on fiscal multipliers and autonomous demand-driven growth.

2.1 Finance: Household debt, subordinate financialization and global financial cycles

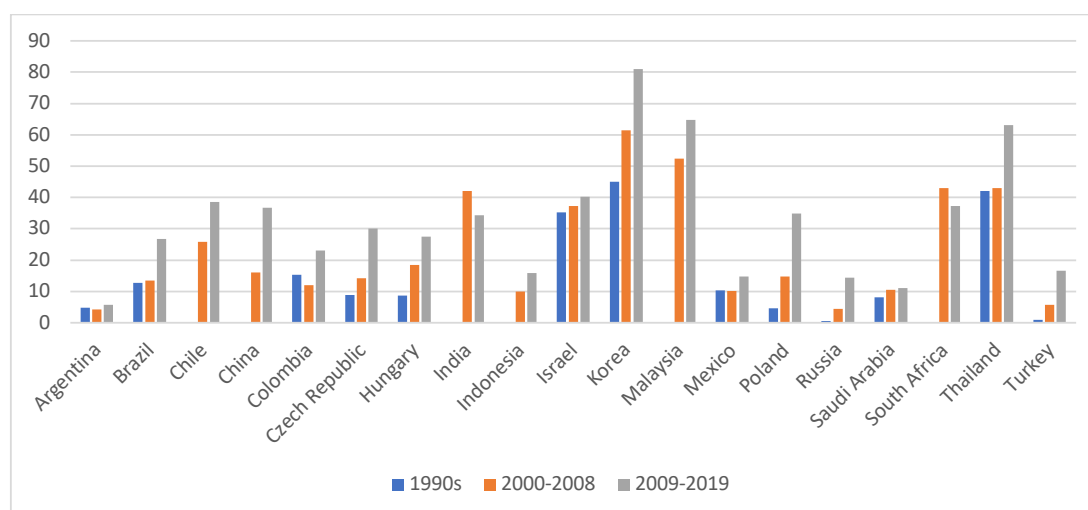
Most broadly, financialization describes “the increasing role of financial motives, financial markets, financial actors and financial institutions in the operation of the domestic and international economies” (Epstein, 2005, p. 3). Macroeconomically, in DCEs, it has been associated with the emergence of export-led mercantilist and debt-led private demand boom GMs before the GFC, the latter characterized by household indebtedness and current account deficits (Hein, 2014, Chapter 10). In between a domestic demand-led GM has been found. In ECEs, debt-led GMs have been identified in Mexico before the GFC (Hein & Mundt, 2012), in Turkey thereafter and in South Africa in both periods (Akçay et al., 2021; Dodig et al., 2016). This, however, does not imply that financialization did not manifest in those ECEs identified as export- or domestic demand-led. Instead, financialization among ECEs is variegated in terms of dimensions and degrees (Karwowski, 2020). In the following, as Kohler and Stockhammer (2021) do for DCEs, we will focus on the financialization, i.e. rising indebtedness, of households in ECEs as a possible growth driver via increased private consumption and residential investment in the context of their subordinate integration into global financial markets.⁵

In debt-led DCEs, fallen demand due to risen income inequality and decreased real investment has been partly substituted by increased debt-financed household consumption and residential investment (Hein, 2014, Chapter 10). Figure 1 indicates that several ECEs have seen an increase in their

⁵ Financialization in ECEs is also associated with rising indebtedness of non-financial corporations (NFCs) (Karwowski & Stockhammer, 2017). In some cases, this rising indebtedness of NFCs is accompanied by rising investment, particularly, in real estate and infrastructure, as in Turkey (Orhangazi & Yeldan, 2021) or China (Chen & Kang, 2018). However, we do not consider it as a possible growth driver because the literature does suggest that rising NFC indebtedness also tends to be associated with heightened involvement of NFCs in financial activities (Demir, 2007, 2009; Akkemik & Özen, 2014; Correa et al., 2012; Farhi & Borghi, 2009), increased holding of liquid assets (Karwowski, 2012) and financial payouts (Kalinowski & Cho, 2009) at the expense of real investment.

household debt during the last decades. 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 financialization among ECEs, e.g. in terms of mortgage debt to GDP and homeowner-ship rates (Fernandez & Aalbers, 2020), the mentioned country-specific studies and reports on China (e.g. Bird, 2020) imply that the increase in household debt in ECEs is largely driven by housing-related financing needs. Household debt is thus assumed to drive growth via private consumption and residential investment.

Figure 1: ECEs' household credit as a percentage of GDP in the 1990s, before and after the GFC



Source: BIS (2021a), own calculations and illustration.

However, in line with the *Financial Instability Hypothesis* proposed by Minsky (1977), growth driven by financial factors tends to be cyclical: During economic booms, economic actors become less risk-averse and incur riskier financial positions, thus, financial fragility rises successively. During the boom, rising asset prices seem to vindicate the current sentiment and fuel an expansionary virtuous cycle of rising debt and asset prices. At a certain point – the Minsky moment – the euphoric sentiment among economic actors ceases, e.g. due to a change in the monetary policy stance, leading to deleveraging, falling asset prices and drag on spending. In the case of ECEs, the instabilities that build up during the boom are marked by their subordinate position in the global financial system. 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. Consequently, to attract capital inflows, ECEs have to offer higher interest rates to compensate for the lower liquidity premium (Bortz & 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 & Glickman, 2002). Their subordinate position is further reflected in the fact that capital flows to these countries largely depend on the decisions of institutional investors in DCEs that are to a large extent determined by the liquidity considerations of these investors and global factors, such as the monetary policy in DCEs (Bonizzi, 2017a). 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 are linked to US monetary policy – increasing during expansionary and decreasing during restrictive monetary policy stances (Bräuning & Ivashina, 2020; Ahmed & Zlate, 2014). The 'taper tantrum' of 2013, when ECEs experienced widespread capital outflows following the US Federal Reserve's announcement of ending its quantitative easing (Akyüz, 2021), constitutes a prominent example of this mechanism.

Country-specific accounts for the instabilities related to subordinate financialization have been described for South Africa by Isaacs & Kaltenbrunner (2018) and for Brazil by Kaltenbrunner & Paineira (2015, 2018).⁶ Similarly, Orhangazi & Yeldan (2021) assert that the Turkish economic crisis of 2018 was the result of a GM dependent on foreign capital that fuelled domestic activity in the non-tradable sector while manifesting import dependence and current account deficits due to real appreciations. This constellation deteriorated the tradable sector and made Turkey vulnerable to a reversal in capital inflows.

Summing up, we consider household debt as a growth driver fuelling private consumption and residential investment. We expect it to exhibit cyclical characteristics amplified by the subordinate position of ECEs in the global financial system.

2.2 Income distribution: Wage-led and (seemingly) profit-led demand

While not considered by Kohler and Stockhammer (2021), we review changes in the income distribution as a possible driver of growth by making use of the post-Kaleckian distribution and growth model based on Bhaduri and Marglin (1990). In this framework, economies are either classified as wage-led if their demand and growth depends positively on an increasing wage share or as profit-led in the opposite case. In theory, the demand regime depends on structural features of the economy: The different propensities to save, the sensitivity of investment decisions in respect to changing demand and profitability, the sensitivity of external demand to cost changes and the sizes of the different demand

⁶ Kaltenbrunner and Paineira (2015, 2018) stress that the increasingly successful attempts of ECEs to borrow internationally in domestic currency and the strengthening of local domestic currency bond markets do not solve the problems of financial fragility. Instead, the fragilities get transformed as the currency mismatches switch to the balance sheets of the international investors. If these investors sell these securities on a large scale, ECEs are confronted with depreciations of their currencies.

components (Lavoie & Stockhammer, 2013). Eventually, determining an economy's demand regime is an empirical task: More often than not, domestic demand is found to be wage-led, as the positive effect via consumption of an increased wage share prevails while its effect on investment is often found to be insignificant. Adding external demand leads in some economies to the assessment of total profit-led demand due to a positive effect of the profit share on net exports (Hein, 2014, pp. 302–303). Table 1 summarizes the findings for 13 out of the 19 ECEs. Overwhelmingly, domestic demand is found to be wage-led. As expected, the findings on total demand are more diverse and not clear-cut. In the case of Korea, Turkey and Argentina, we see a majority of studies finding total wage-led demand. For China and India, the majority of studies finds them to be profit-led. For the remaining ECEs, there either exists only one study or the studies yield a contradictory picture. 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 may well be characterized by a rising profit share due to pro-capital policies.

Particularly due to rising wage inequality, the exclusive focus on the functional income distribution in the literature has been called into question. Hein and Prante (2020) provide an overview on the different Kaleckian growth models accounting for wage inequality: Some models distinguish directly from indirect/overhead labour, thereby, 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 models has introduced interdependent consumption patterns in which lower income ranks emulate the consumption behaviour of higher ranks, so that consumption may rise in the face of increased profit shares and income inequality, accompanied by higher private debt ratios (e.g. Kapeller & Schütz, 2015). This further encourages us to look at distributional developments when finance is identified as a relevant growth driver, as done so by Kohler and Stockhammer (2021). To investigate whether growth in our investigated periods was driven by changes in the income distribution, we will use the Gini coefficient of disposable income as a measure of personal income distribution additionally to the wage share.

Table 1: Overview of studies investigating ECEs demand regimes.

Country	Domestic demand		Total demand	
	Wage-led	Profit-led	Wage-led	Profit-led
Argentina	Onaran & Galanis (2012): 1970-2007; Reyes (2019): 1970-2017; Alarco (2016): 1950-2012		Reyes (2019): 1970-2017; Alarco (2016): 1950-2012; Oyvatt et al. (2020): 1972-2007	Onaran & Galanis (2012): 1970-2007;
Brazil	Reyes (2019): 1970-2016; Alarco (2016): 1950-2012; Tomio (2020): 1956-2008; Araújo & Gala (2012): 1960-2008		Alarco (2016): 1950-2012; Tomio (2020): 1956-2008	Reyes (2019): 1970-2016; Araújo & Gala (2012): 1960-2008; de Jesus et al. (2018): 1970-2008
Chile	Reyes (2019): 1970-2016; Alarco (2016): 1950-2012		Reyes (2019): 1970-2016	Alarco (2016): 1950-2012; Oyvatt et al. (2020): 1967-1994
China	Onaran & Galanis (2012): 1978-2007; Jetin & Reyes Ortiz (2020): 1982-2016	Wang (2009, Chapter 3): 1993-2007; Molero-Simarro (2015): 1978-2007	Jetin & Reyes Ortiz (2020): 1982-2016	Onaran & Galanis (2012): 1970-2007; Wang (2009, Chapter 3): 1993-2007; Molero-Simarro (2015): 1978-2007
Colombia	Reyes (2019): 1970-2016; Alarco (2016): 1950-2012		Reyes (2019): 1970-2016; Alarco (2016): 1950-2012; Loaiza et al. (2017): 1970-2011	Oyvatt et al. (2020): 1967-2011; Charpe et al. (2014): 1970-2010
India	Onaran & Galanis (2012): 1970-2007			Onaran & Galanis (2012): 1970-2007; Oyvatt 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	Oyvatt et al. (2020): 1971-2011

Source: Jiménez (2020), Akcay et al. (2021) and own extension.

Notes: No studies on the demand regimes of the Czech Republic, Hungary, Israel, Poland, Russia and Saudi Arabia.

Table 1 (cont.): Overview of studies investigating ECEs demand regimes.

Country	Domestic demand		Total demand	
	Wage-led	Profit-led	Wage-led	Profit-led
Korea	Onaran & Galanis (2012): 1970-2007; Kurt (2018): 1970-2011; Joo et al. (2020): 1982-2018		Onaran & Galanis (2012): 1970-2007; Onaran & Stockhammer (2005): 1970-2000; Oyvatt et al. (2020): 1964-2011; Joo et al. (2020): 1982-2018	Kurt (2018): 1970-2011
Malaysia				Oyvatt et al. (2020): 1972-2011
Mexico	Onaran & Galanis (2012): 1970-2007; Reyes (2019): 1970-2017; Alarco (2016): 1950-2012		Reyes (2019): 1970-2017; Alarco (2016): 1950-2012	Onaran & Galanis (2012): 1970-2007; Oyvatt et al. (2020): 1972-2009; Charpe et al. (2014): 1970-2011
South Africa	Onaran & Galanis (2012): 1970-2007		Oyvatt et al. (2020): 1972-2007; Strauss & Isaacs (2016): 1970-2013	Onaran & Galanis (2012): 1970-2007
Thailand		Jetin & Kurt (2016): 1970-2011		Jetin & Kurt (2016): 1970-2011
Turkey	Onaran & Galanis (2012): 1970-2007; Yilmaz (2015): 1987-2006		Onaran & Galanis (2012): 1970-2007; Onaran & Stockhammer (2005): 1963-1997; Oyvatt et al. (2020): 1964-2009;	Yilmaz (2015): 1987-2006

Source: Jiménez (2020), Akcay et al. (2021) and own extension.

Notes: No studies on the demand regimes of the Czech Republic, Hungary, Israel, Poland, Russia and Saudi Arabia.

2.3 Measures of competitiveness

2.3.1 Price competitiveness

In this section, we look more thoroughly into price competitiveness as a possible growth driver. Price competitiveness is proxied via the real exchange rate (RER), defined as the price of a domestic consumption basket relative to a consumption basket of a trading partner. Similarly, the real effective exchange rate (REER) relates the domestic consumption basket to a weighted basket of trading partners. Following the notation of the Bank for International Settlements (BIS), an increase (decrease) in the RER, or REER, refers to a real appreciation (depreciation) and is associated with a decrease (increase) in international price-competitiveness. However, real depreciations also have distributional effects and are associated with wage share decreases as imported goods become more expensive relative to wages. Thus, as outlined in the previous section, a decrease in the wage share and the associated real depreciation fosters demand if the increased demand via net exports triggered by the rise in competitiveness offsets the domestic demand-depressing effects caused by the redistribution towards profits. If, however, the increase in net exports is too low, real depreciations depress demand (Hein, 2014, Chapter 7). A further demand-depressing effect of a real depreciation is the negative balance sheet effect it causes as the service of external debt becomes more expensive (e.g. Krugman, 1999). Besides these negative effects of real depreciation on demand, there exists an extensive body of literature stressing the positive effects of a depreciated 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 crucial role of ‘modern tradable activities’ and the respective structural transformation towards higher productivity activities. The channel “comprises three broad elements: 1) Modern tradable activities are intrinsically very productive and/or generate different forms of externalities like learning by doing, learning by investing and technological spillovers. 2) Given this trait, the reallocation of (current and future) resources to these activities—i.e., structural change—accelerates GDP per capita growth. 3) Accumulation in these activities depends on their profitability, which in turn depends on the level and volatility of the RER. A sufficiently [low] and stable RER is an instrument to compensate for market failures and induce sustained capital accumulation” (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 affect growth positively via boosting net exports and through the ‘tradable-led growth-channel’. To assess in how far price competitiveness influenced growth in our sample, we will use the average REER growth rate of the period as an explanatory variable.

2.3.2 Non-price competitiveness

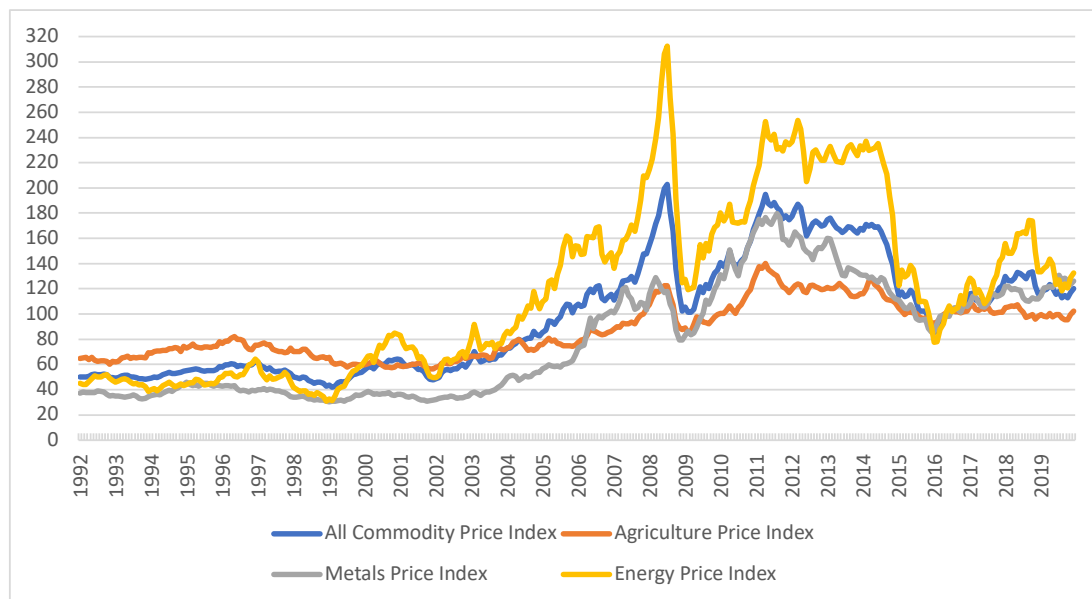
The previously outlined ‘tradable-led growth-channel’ bears some resemblance with the literature that stresses the importance of technological capabilities, i.e. non-price competitiveness, for external demand. The importance of non-price factors can be derived from Thirlwall's (1979) law according to 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 that are both determined by technological capabilities (McCombie, 1989). The more technological capabilities a country has, the more complex and differentiated the products it can produce. These increasingly sophisticated goods are characterized by higher income elasticities of demand for exports and lower income elasticity of demand for imports and associated with higher growth rates (Gouvêa & Lima, 2010). The importance of income elasticities of exports and imports also has a long tradition in economic structuralism where the reliance on exporting primary commodities is associated with deteriorating terms of trade and detrimental consequences for the growth performance (e.g. Ocampo & Parra, 2006).

Hidalgo and Hausmann (2009) have introduced an economic complexity index (ECI) to quantify the technological capabilities of an economy. 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. Employing the ECI, Gräbner et al. (2020) show the crucial role of different technological capabilities and their relation to different macroeconomic regimes in explaining the divergences within the Eurozone. Export-led GMs require a certain degree of technological capabilities, while, in the absence of these capabilities, economies might tend to develop debt-led GMs. Moreover, structuralist scholars have also made use of the ECI to vindicate their reasoning regarding the pivotal role of technological capabilities in fostering economic growth and development via increasing returns to scale and positive externalities (Gala et al., 2018). Lately, the importance of non-price competitiveness in driving external demand is also suggested by the macroeconomic policy regime-approach of Hein and Martschin (2021), as well as, by the investigation of growth drivers by Kohler and Stockhammer (2021) for DCEs. In order to assess the role of non-price competitiveness as a growth driver, we will relate ECEs' ECI development to their growth.

2.4 Commodity prices and super cycles

While Kohler and Stockhammer (2021) did not include commodity prices in their study on DCEs, we consider them as a potential growth driver. As commodity prices have been found to follow a cyclical movement over 20-70 years, the notion of ‘commodity super-cycles’ (Erten & Ocampo, 2013), gained prominence. The most recent cycle started around 1999 (Figure 2). 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. With the exception of oil, commodity prices and their super-cycles are essentially demand-driven. The main driver of this recent cycle is said to be the industrialization and urbanization of ECEs, particularly China and India (Erten & Ocampo, 2013). Furthermore, the financialization of commodities is also understood to have contributed to rising commodity prices (Pollin & 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.

Figure 2: Monthly commodity price indices (2016=100), 1992-2019.



Source: IMF (2021a), own illustration.

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 & Souza, 2019). However, if not counteracted,

the increased export volume can lead to real appreciation with detrimental effects on manufacturing industries' price competitiveness – as described by the concept of 'Dutch disease' (Bresser-Pereira, 2008). Evidently, possible positive effects of a secular rise in commodity prices can only occur in commodity exporting countries while commodity import-dependent countries are likely to suffer. To assess the cross-country effect of commodity prices, we will regress the countries' growth on the growth of a country-specific and weighted index of real commodity export prices.

2.5 Fiscal multipliers, hysteresis and autonomous demand-driven growth

In recent years, a consensus on the positive effects of expansionary fiscal policy on macroeconomic performance seems to have emerged (Stockhammer et al., 2019, pp. 58–60). This effect is commonly 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 and upswing times as shown by the meta-regression analysis by Gechert and Rannenberg (2018). This is commonly explained with fewer supply constraints and an accommodative monetary policy stance during recessions. 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 & Rannenberg, 2018). For ECEs, several studies contend that fiscal multipliers are smaller than for DCEs (Hory, 2016; Ilzetzki et al., 2013). Moreover, fiscal consolidation might have negative hysteresis effects as the reductions in output might have long-term negative effects on the economic performance while fiscal expansion could prevent such effects or even trigger positive ones (DeLong & Summers, 2012; Gechert et al., 2019).

A more long-term perspective is taken in another 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 Harrodian 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, in this framework, higher growth rates of government expenditure imply higher rates of growth and accumulation. While Allain avoids the treatment of 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.

In their study, Kohler and Stockhammer (2021) find that expansionary fiscal policy drove post-GFC growth in DCEs. To assess this relation for our sample, we will regress the general government balance

as an indicator of the fiscal policy stance on growth.⁷ In this respect, we deviate from the methodology of Kohler and Stockhammer (2021) where the cyclically-adjusted fiscal balance to potential output was employed to that end. We maintain that the demand-stabilising effect of fiscal policy also encompasses its cyclical elements captured by the government balance. Moreover, the estimation of the output gap that is needed to derive the cyclically-adjusted fiscal balance comes with several caveats (see e.g. Heimberger & Kapeller, 2017). One downside, however, of using the general government balance is that it does not necessarily indicate any intention of the identified fiscal policy stance. This concern is addressed within a macroeconomic policy regime approach as recently conducted by Hein and Martschin (2021), which is beyond the scope of the current paper.

3 Growth performance and drivers in 19 ECEs before and after the Global Financial Crisis

Table 2 depicts the average real GDP growth rates and current account balances of 19 ECEs in both periods 2000-2008 and 2009-2019. After the GFC, ECEs grew less (3.28%) than before (4.83%). The Chinese growth performance of 10.46% before and 7.83% after the GFC stands out while India and Indonesia are the only ones that achieved higher growth rates after the crisis. Remarkable is the poor performance within the Latin American countries, with Argentina and Brazil almost stagnating after the GFC. Among the Central and Eastern European (CEE) countries, Poland's post-crisis performance stands out, especially when compared to Russia. Among the Middle Eastern countries, Turkey grew slightly less after the GFC and Israel's growth was roughly equal in both periods, whereas Saudi Arabia's growth fell considerably, as did that of South Africa. Although the development in terms of the current account is more diverse, there is a trend of worsening current accounts after the crisis. While this development was observable throughout the Latin American region, the current account improved on average in Korea, Thailand, the Czech Republic, Hungary, Poland and Israel.

⁷ According to the literature on autonomous demand-driven growth, it would make sense to look at the growth of government expenditure. However, government expenditure itself is a component of GDP and thus at odds with the definition of a growth driver provided above.

Table 2: GDP growth rates and current account balances of 19 ECEs and unweighted averages before and after the GFC.

Country	Real GDP growth rate in %		Current account balance in % of GDP	
	2000-2008	2009-2019	2000-2008	2009-2019
Argentina	3.53	0.72	2.42	-1.85
Brazil	3.78	1.25	-0.62	-2.62
Chile	4.84	2.88	0.62	-2.25
Colombia	4.21	3.48	-1.32	-3.78
Mexico	2.23	1.96	-1.42	-1.58
China	10.46	7.83	4.98	2.19
India	6.11	6.77	-0.36	-2.19
Indonesia	5.16	5.34	2.53	-1.56
Korea	5.37	3.08	1.19	4.44
Malaysia	5.49	4.71	12.28	5.77
Thailand	4.87	3.25	2.56	4.82
Czech Republic	4.29	1.78	-3.89	-0.55
Hungary	3.53	1.94	-7.81	1.40
Poland	4.14	3.57	-4.56	-2.41
Russia	6.96	1.04	9.52	3.68
Israel	3.44	3.47	1.11	3.11
Saudi Arabia	4.14	2.96	17.06	8.59
Turkey	5.00	4.89	-3.13	-4.06
South Africa	4.17	1.39	-2.37	-3.55
Average	4.83	3.28	1.51	0.40

Sources: World Bank (2021), author's calculations.

In the following, we will investigate the growth drivers and their development that accompanied the outlined post-crisis slowdown in GDP growth and trend of worsening current accounts among ECEs. The growth drivers, their main demand components, the associated theoretical concepts and the employed empirical indicators⁸ are summarized in Table 3. At first, following the methodology of Kohler and Stockhammer (2021), cross-country bivariate correlations of each growth driver with national growth for both periods are established. For the growth drivers, the average growth rate or

⁸ See Table A1 in the appendix for further information regarding data definition, sources, notes, restrictions and country abbreviations.

annual changes are employed to illustrate the dynamics during the periods. In the subsequent section, multiple regressions for both periods are conducted to further strengthen our findings from the simple linear regressions. Along the way, different robustness checks are conducted.

Table 3: Overview of growth drivers, their main demand component, the associated theoretical concepts and their empirical proxy.

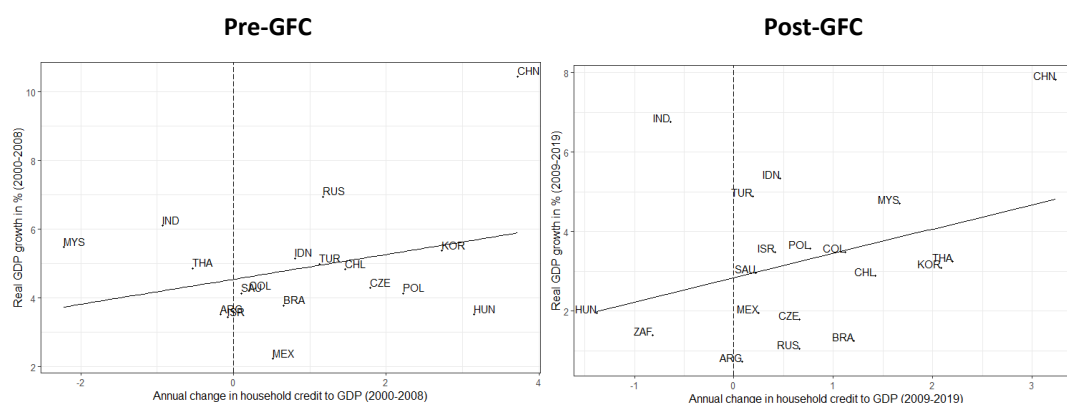
Growth driver	Main demand component	Theoretical concepts	Proxy and empirical indicator
Finance	Private consumption and residential investment	Household debt in the context of (subordinate) financialization and global financial cycles	Household credit to GDP
Income distribution	Private consumption or external demand depending on the demand regime and emulation effects	Wage-led and (seemingly) profit-led demand	Wage share and Gini coefficient of disposable income
Price competitiveness	Net exports	Negative balance sheet and distributional effects; positive effect on net exports; tradable-led growth	Real effective exchange rate (REER)
Non-price competitiveness		Thirlwall's law; economic complexity; increased returns to scale and spillovers	Economic Complexity Index (ECI)
Commodity prices		Commodity super cycles; Dutch disease	Commodity export price index (CEPI)
Fiscal Policy	Public demand	Fiscal multipliers; autonomous demand-driven growth	General government balance

Finance: Household debt

In order to examine the role of finance in driving growth, we assess the average annual change in household credit to GDP against the average real GDP growth for 19 ECEs in both periods. Thus, although we have outlined that household credit in ECEs is often linked to housing finance needs, we are not able, as Kohler and Stockhammer (2021) did for DCEs, to link household credit and GDP to the development of house prices as the respective data is too fragmented. With this in mind, we see in

Figure 3 that in the pre-GFC period there is a positive relationship between growth and household debt across the sample. However, excluding China as an extreme outlier, the relationship becomes negative although insignificant. After the crisis, we see that the relationship increases in magnitude and in significance without, however, surpassing the 10% threshold. Removing China and India as the most extreme post-GFC outliers leaves the coefficient's sign unchanged.⁹

Figure 3: Household credit and GDP growth in the pre-GFC and post-GFC period.



slope: 0.362; p-value: 0.219; $R^2=0.093$

slope: 0.613; p-value: 0.141; $R^2=0.123$

w/o CHN: -0.108; p-value: 0.619; $R^2=0.017$

w/o CHN & IND: 0.456; p-value: 0.232; $R^2=0.094$

Sources: World Bank (2021) and BIS (2021a), author's calculations. Notes: In the pre-GFC period, South Africa was excluded due to insufficient data.

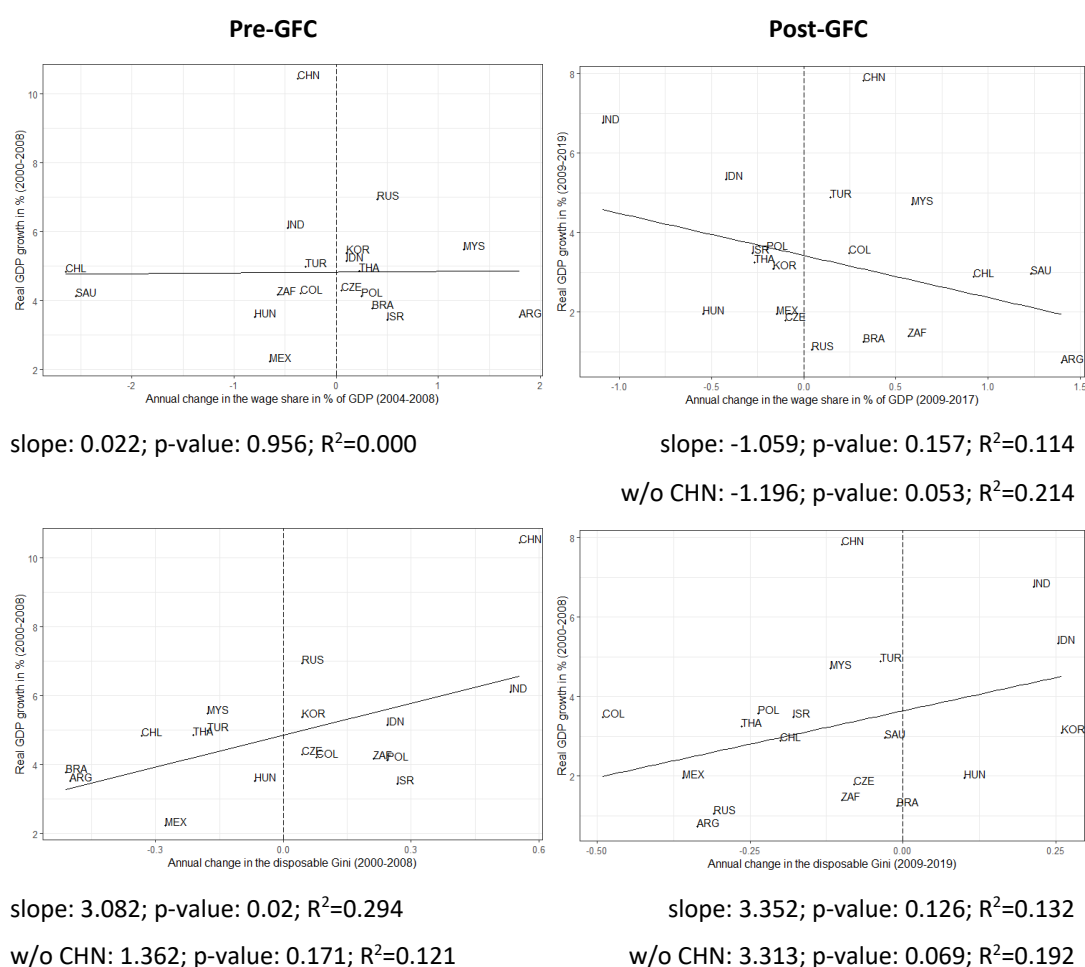
Distribution: wage share and Gini coefficient of disposable income

In order to assess the effect of changes in income distribution on growth, we look at the development of the wage share and the Gini coefficient of disposable income and their cross-country correlations with GDP growth. Starting with the functional income distribution, visible in the upper panel of Figure 4: In the post-GFC period, there is no observable relation between the functional income distribution and GDP growth across the sample, as the line is flat and highly insignificant. In the post-GFC period, the slope of the line becomes negative implying that countries in the sample tended to grow faster the more their wage share fell. While the coefficient does not reach the 10% level of significance for the complete sample, it reaches this by excluding China as the starkest outlier. In the lower panel of Figure 4 on the left, 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 in the sample tend to have grown faster the more

⁹ Running the regression using the average level of household debt to GDP instead of the average annual change yields similarly positive coefficients that do not reach a 10% level of significance.

their personal income inequality increased. It has to be noted that excluding China as the most pronounced outlier, the positive coefficient loses its significance. In the post-GFC period, the coefficient has the same sign although not reaching the 10% significance level in the unrestricted displayed sample. In this case, however, removing China does lead to reaching a 10% level of significance.

Figure 4: Distribution and GDP growth in the pre-GFC and post-GFC period, changes in the wage share (upper panel) and changes in the disposable Gini (lower panel).



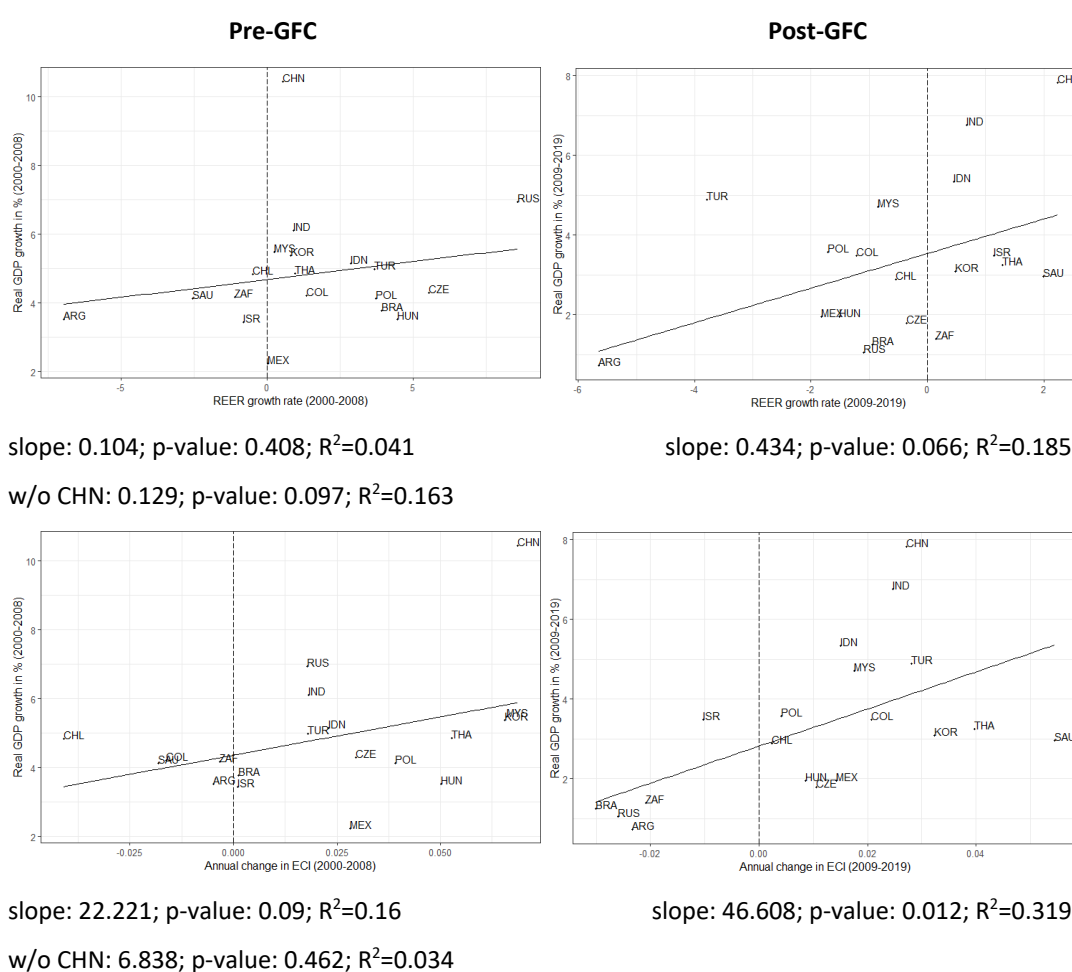
Sources: World Bank (2021), ILO (2021) and Solt (2020), author's calculations. Notes: In the pre-GFC Gini of disposable income regression, Saudi Arabia was excluded due to insufficient data.

Price and non-price competitiveness: REER and economic complexity

As laid out, the REER is used as a measure of price competitiveness. Prior to the GFC, as can be seen in the upper panel of Figure 5, real appreciations were more prevalent overall. As indicated by the fitted line, the relationship between the REER and growth was positive, i.e. appreciations and concomitant

losses in price competitiveness were associated with higher growth; while insignificant in the unrestricted sample, removing outlying China leads to reaching the 10% significance level. After the GFC, a slight majority experienced depreciations, particularly the Latin American and CEE countries. In Asia, on the other hand, all countries, except Malaysia, experienced real appreciations, most pronounced in China. The positive relationship between growth and real appreciations prevailed after the GFC, becoming even more pronounced and significant.

Figure 5: Competitiveness and GDP growth in the pre-GFC and post-GFC period, REER growth rate (upper panel) and changes in the ECI (lower panel).



Sources: World Bank (2021), BIS (2021b) and OEC (2021), author's calculations.

Non-price competitiveness is assessed using the ECI. Higher ECI measures are associated with higher non-price competitiveness. As illustrated in the lower panel of Figure 5, most of the countries were able to increase their non-price competitiveness prior to the GFC with overall better perfor-

manances among the CEE and Asian countries and poorer performances of South Africa, the Middle Eastern and Latin American countries. Across the sample, we observe a positive relationship between non-price competitiveness and growth. The slope coefficient is significant at the 10% level, thus suggesting that non-price competitiveness drove growth during this period. However, the significance of the coefficient disappears when China as an outlier is removed. In the post-GFC period, the coefficient becomes even more pronounced and statistically significant.¹⁰

Commodity export prices

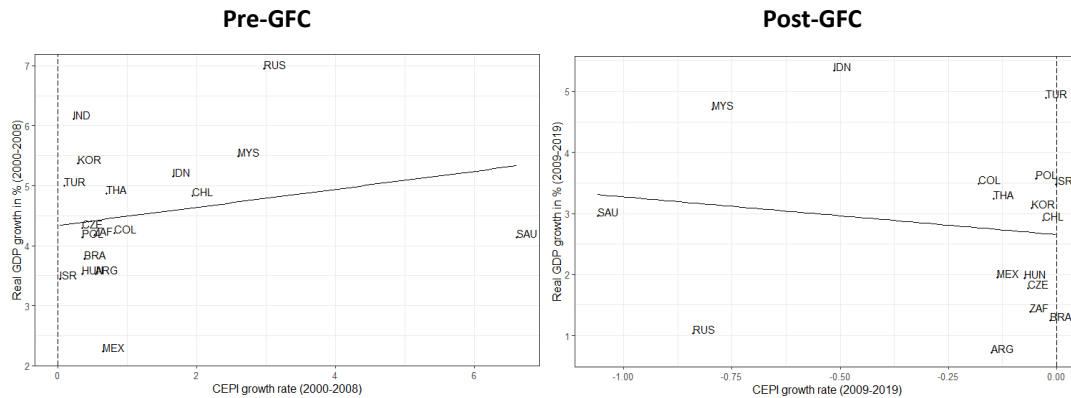
To assess the role of commodity prices in driving growth before and after the GFC, we use a country-specific, weighted real commodity export price index (CEPI) supplied by the International Monetary Fund (IMF, 2021a) (see Table A1 in the appendix for further information). Overall, the development of the CEPI before the crisis largely reflects the boom in commodity prices associated with the super cycle that started in the early 2000s. Hence, as visible in Figure 6, the sample countries mostly experienced increases in their CEPI, which were most pronounced in Indonesia, Chile, Malaysia, Russia and, especially, Saudi Arabia. Having excluded China as an extreme outlier, the pre-GFC coefficient relating CEPI and GDP growth is positive but not significant. As we have seen in Figure 2, commodity prices fell with the onset of the GFC but recovered quickly thereafter. After having more or less plateaued between 2011 and 2014, prices fell until 2016 and have never fully recovered since. This got reflected in post-GFC CEPI growth rates that were mostly negative. The most pronounced decreases were experienced in the ECEs that previously experienced the highest increases in their CEPI. The cross-country relation between CEPI and GDP growth turned negative but stayed insignificant.¹¹ Additionally to China, India was also excluded as an outlier in this period.¹²

¹⁰ When both competitiveness measures are assessed solely against external demand, i.e. the current account (Figure A1 in the appendix), the results for the post-GFC period are confirmed. However, in the pre-GFC period there is a negative although not significant relationship between ECI and the current account balance across the sample, even when the commodity exporting and outlying countries of Saudi Arabia, Russia and Malaysia are excluded. Looking at the pre-GFC period relationship between the current account and the REER with those excluded, we find a significant relation between price competitiveness and the current account. This may suggest that while price-competitiveness was not able to drive growth it was at least conducive to the current account while the importance of non-price factors has increased after the GFC.

¹¹ Relating the growth in countries' CEPI to their current account balances would make little sense as, due to the index' construction, higher CEPIs are associated with a more positive current account.

¹² In both periods, China and India exhibited relatively high GDP growth rates accompanied by close to zero CEPI growth rates. Including these stark outliers led to flat fitted lines with even lower significance. Furthermore, the literature suggests that China and India should be excluded from the assessment of commodity prices as drivers of growth because their growth leads to increased commodity prices and not vice versa (Erten & Ocampo, 2013).

Figure 6: CEPI and GDP growth in the pre-GFC and post-GFC period.



slope: 0.15; p-value: 0.38; $R^2=0.048$

slope: -0.618; p-value: 0.566; $R^2=0.022$

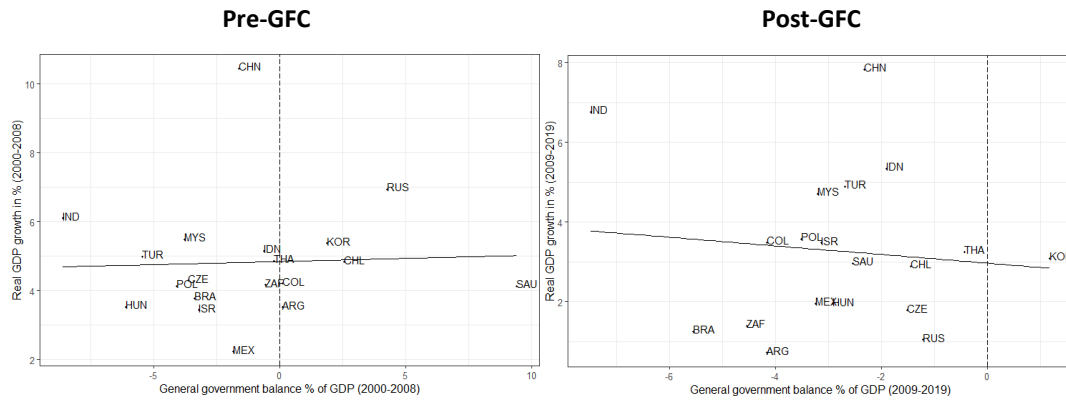
Sources: World Bank (2021), BIS (2021b) and OEC (2021), author's calculations. Notes: China as the most pronounced outlier was excluded in both periods, and India in the second period as an equally pronounced one.

Fiscal policy: Government balance

To assess the role of fiscal policy in driving growth, the general government balance as percentage of GDP is employed. Before the crisis, as can be seen in the upper panel of Figure 7, fiscal policy was expansionary overall in a majority of ECEs – expressed in negative government balances. The most pronounced public deficit was run by India with -8.61% of GDP, followed by Hungary and Turkey, while the largest surpluses were reached in Saudi Arabia with 9.41% of GDP, followed by Russia, Chile and Korea. For the pre-crisis period, there is no cross-country relationship between fiscal policy and growth as the coefficient is slightly positive but highly insignificant. Over the post-GFC period, there is a clear shift towards a more expansionary fiscal policy visible as all countries, besides Korea, were running an average public deficit – with, again, India running the most pronounced one. Over the sample, the relationship between the government balance and growth turned negative, which would suggest that expansionary fiscal policy drove growth. However, the coefficient lacks significance and even turns insignificantly positive when the most pronounced outliers – China and India – are excluded.¹³

¹³ When instead using the structural general government balance as an explanatory variable the results stayed the same in terms of the coefficients signs and significance and regarding the overall fiscal policy stance. Furthermore, we have used the annual change in general government balance with a similar result: insignificant as a cross-country growth driver but while a majority of ECEs before the GFC exhibited a dynamic towards fiscal balance the opposite dynamic was more prevalent in the post-GFC period.

Figure 7: General government balance and GDP growth in the pre-GFC and post-GFC period.



slope: 0.018; p-value: 0.863; $R^2=0.002$

slope: -0.101; p-value: 0.664; $R^2=0.011$

w/o CHN & IND: 0.191; p-value: 0.38; $R^2=0.052$

Sources: World Bank (2021) and IMF (2021b), (see Table A1), author's calculations.

4 Econometric test: Multiple regression

Following the methodology of Kohler and Stockhammer (2021), we conduct a multiple regression for each period to see whether our findings from the simple linear regressions hold when we control for all growth drivers simultaneously. The method applied is straightforward as we conduct a multiple regression using ordinary least squares estimators. Thus, we explain each period's GDP growth average by using the respective growth drivers' averages as can be seen in equation (1) below. GROWTH denotes the country's real GDP growth rate average; HHDEBT is the average annual change in household credit to GDP; WAGESHARE denotes the average annual change in the wage share; DISPGINI is the average annual change in the disposable Gini coefficient; REERGROWTH stands for the average annual REER growth rate; ECICHANGE denotes the average annual change in the ECI; CEPIGROWTH denotes the average annual CEPI growth rate; GOVBALANCE denotes the average annual general government balance; we also include a dummy to control for the influence of China due to the extreme values it exhibited in several of the simple linear regressions; the β s denote the intercept and the coefficients of the growth drivers; the subscripted *i*s denotes the country. Due to our relatively low number of observations and high number of dependent variables, our regressions exhibit low degrees of freedom. Additionally, due to possible endogeneities between the growth drivers and actual growth, e.g. an increase in household debt might be induced by higher growth and vice versa, we might face a simultaneity bias. Hence, the results have to be treated cautiously. The equation is run for either period. Results are reported in Table 4.

$$(1) \text{GROWTH}_i = \beta_0 + \beta_1 \text{HHDEBT}_i + \beta_2 \text{WAGESHARE}_i + \beta_3 \text{DISPGINI}_i \\ + \beta_4 \text{REERGROWTH}_i + \beta_5 \text{ECICHANGE}_i + \beta_6 \text{CEPIGROWTH}_i \\ + \beta_7 \text{GOVBALANCE}_i + \beta_8 \text{CHINADUMMY}_i + \varepsilon_i$$

Table 4: Multiple regression with real GDP growth as independent variable for the pre- and post-GFC period.

	Real GDP growth in % (2000-2008)	Real GDP growth in % (2009-2019)
Intercept	4.646*** (0.000)	1.16 (0.194)
HHDEBT	-0.326 (0.336)	0.591 (0.161)
WAGESHARE	0.061 (0.876)	-0.97 (0.124)
DISPGINI	1.301 (0.263)	2.164 (0.207)
REERGROWTH	0.172 (0.129)	-0.128 (0.534)
ECICHANGE	3.876 (0.756)	37.516** (0.025)
CEPIGROWTH	-0.001 (0.958)	-0.724 (0.506)
GOVBALANCE	0.103 (0.446)	-0.435** (0.039)
CHINADUMMY	6.137*** (0.005)	3.532* (0.054)
Observations	18	19
R²	0.789	0.789
p-value F-Test	0.023	0.013

Notes: South Africa was excluded in the first period due to missing household debt data. Coefficients with p-values in parentheses. The asterisks signify the significance level (* = 10%-level; ** = 5%-level; *** = 1%-level).

In the pre-GFC period, as can be seen in the left row of Table 4, the signs of the coefficients resemble those we derived from the simple linear regressions, however, no coefficient reaches the 10% significance level. For the post-GFC period, we also have the resemblance in terms of the signs of the coefficients compared to those from the simple linear regressions. Moreover, the positive ECI coefficient and the negative one of government balances are significant at the 5% level suggesting that non-price competitiveness and expansionary fiscal policy contributed to growth in the post-GFC period. However, as in the case of the simple linear regression, the significance of expansionary fiscal policy as a growth driver is conditional on India's inclusion in the sample, as adding an India dummy lead to the coefficient becoming insignificant.

5 Discussion: Heterogeneity amidst entrenched financialization and expansionary fiscal policy

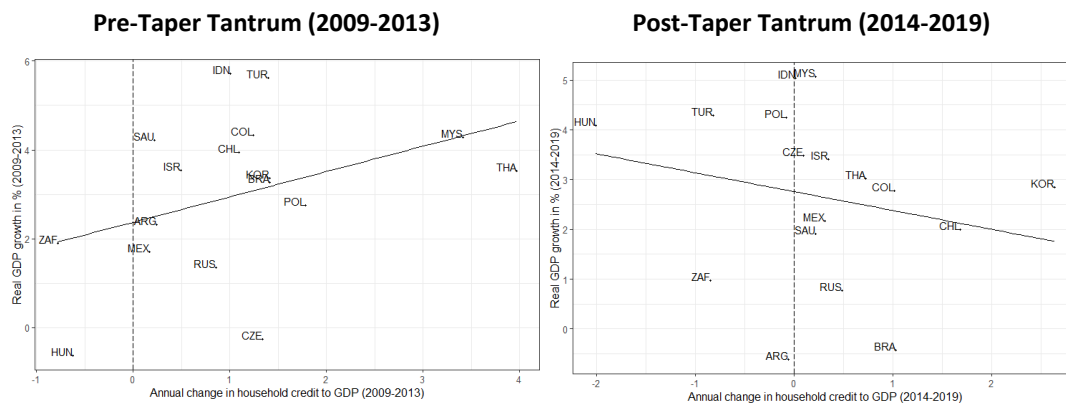
Before further assessing our results, some caveats regarding the methodology should be recalled. First, we do establish coefficients that, at best, signify a correlation between the respective variables. As is known, correlations are not causalities, however, for causalities to exist there have to be correlations. Furthermore, it must be emphasized that the coefficients we derive are cross-country ones. Thus, failing to establish a cross-country correlation does not mean that this indicator was not relevant for every country but might be a sign of heterogeneity within the sample. Moreover, certain empirical indicators were only available in a restricted sense that could shape the results (see Table A1). Finally, the GFC is not the only structural breaking point one could think of. Besides the possibility of countries exhibiting heterogeneity in their structural breaking points as well, we will elaborate on two potentially alternative breaking points: the ‘taper tantrum’ in 2013 and the fall in commodity prices after 2014.

These caveats in mind, we have seen that ECEs overall grew slower after the GFC than they did before with a trend towards worsening current account balances (Table 2). In terms of cross-country growth drivers, significant and robust results are sparse. The simple and multiple linear regressions suggest to some extent that household debt has become more important in the post-GFC period in driving growth although with lacking significance when we control for China (Figure 3, Table 4).¹⁴ Meanwhile, it is evident that the post-GFC period was overall marked by further entrenched financialization in terms of household debt as only Hungary, South Africa and India experienced private deleveraging over the period. Failing to observe the cross-country importance of financial factors in driving growth of ECEs – as in the case of DCEs (Kohler & Stockhammer, 2021) – against the background of progressing financialization, points at several issues: First, this hints at the heterogeneity among the investigated ECEs in terms of their ‘variegated’ forms of financialization (Karwowski, 2020) and GMs (Akçay et al., 2021). Thus, ECEs’ growth materializes through distinct demand components that rely on diverse growth drivers with household debt only playing a major role in some constellations. Furthermore, the subordinate nature of ECEs’ financialization weakens the relation between their financial factors and domestic economic conditions. Instead, capital inflows and credit growth in financially open ECEs correlate with developments in DCEs, like loose US monetary policy (Bonizzi, 2017b; Bräuning & Ivashina, 2020). A recent and prominent example of this phenomenon was the ‘taper tantrum’ of 2013 when ECEs faced sustained capital outflows following the US Federal Reserve’s announcement of future monetary policy tightening (Akyüz, 2021). Figure 8 visualizes this: household debt in ECEs

¹⁴ As noted earlier, we have used household credit instead of private credit as a whole due to the financialization tendencies among ECEs’ NFCs, which lead to increasing usage of debt for financial instead of real purposes. However, in countries such as Turkey (Orhangazi & Yeldan, 2021) or China (Chen & Kang, 2018) NFC debt fuels activity in non-tradable sectors and is thus a possible growth driver. However, performing the regressions with total private credit or NFC credit leads to the same results in terms of signs and significance as with household credit.

accelerated faster in advance of the ‘taper tantrum’ than afterwards when more instances of private deleveraging can be observed. Moreover, although lacking significance, Figure 8 suggests that household debt may in fact have played a cross-country role in driving growth in the pre-‘taper tantrum’ period and less so thereafter.

Figure 8: Household credit and GDP growth for the pre- and post-taper tantrum periods without China and India as pronounced outliers.



slope: 0.57; p-value: 0.122; $R^2=0.152$

slope: -0.3786; p-value: 0.385; $R^2=0.051$

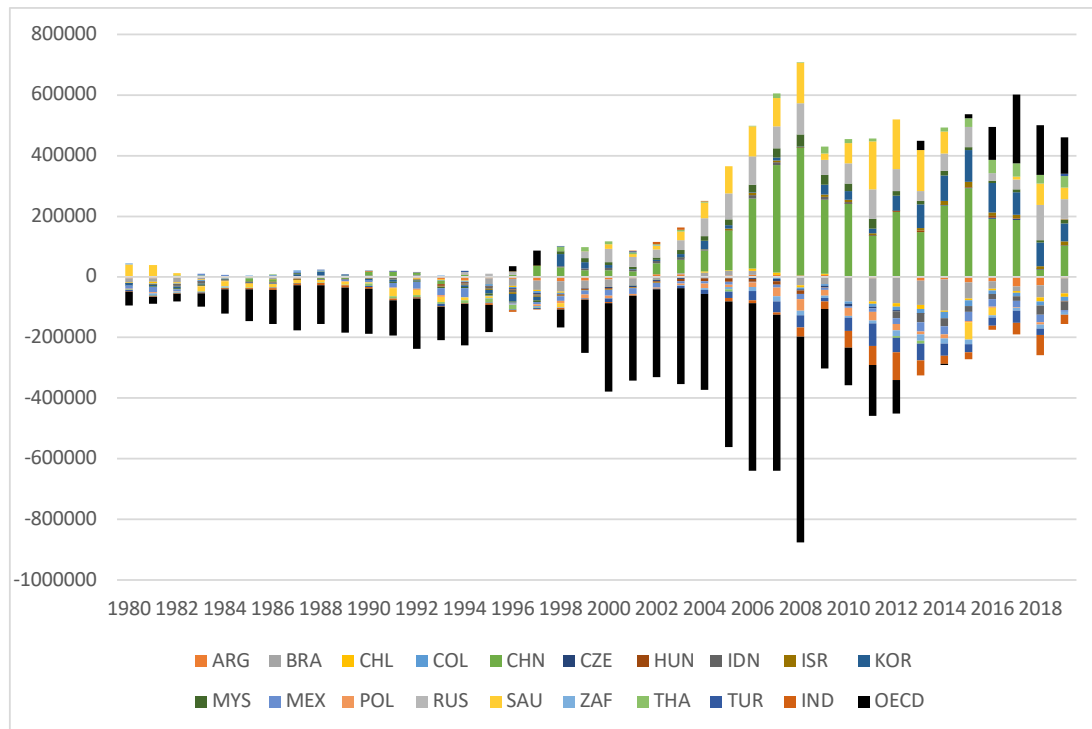
Sources: World Bank (2021) and BIS (2021a), author’s calculations.

With the distributional developments being quite heterogeneous across countries and periods, our findings suggest that growth in both periods was to some extent driven by increasing personal income inequality. In the post-GFC period, growth was related to a decreasing wage share across the sample. However, these coefficients lose their significance in the multiple regression (Figure 4; Table 4). Relating our findings to the identified demand regimes (Table 1), we see that India’s growth was accompanied by rising profit shares in both periods and thus aligned with its identification as a profit-led economy. Similarly, China, also identified as profit-led, experienced growth accompanied by a falling wage share before the GFC. After the GFC, however, China grew less while its wage share rose; leaving open the question whether it has departed from following a growth strategy in accordance with its demand regime or whether its regime has changed as suggested by Jetin & Reyes Ortiz (2020). Meanwhile, Turkey that has been identified as wage-led saw its wage share fall in the pre-crisis period and rise in the period thereafter while maintaining its growth rate. Korea, on the other hand, saw a change from a growing wage-share before to a decreasing wage share after the GFC accompanied by a fall in its growth rate. This fall in performance in the light of its distributional development would be in line with the identification as a wage-led economy. Finally, Argentina as a wage-led economy saw its wage share increase in both periods at, however, low GDP growth rates (Figure 4; Table 1).

As we have pointed out, distribution as a growth driver is connected to price competitiveness. Despite some indications of cross-country profit-led growth following the GFC, we have found no indication for a cross-country relation between growth and price competitiveness in both periods (Figure 5; Table 4) – similarly to Kohler and Stockhammer (2021) for DCEs. Besides the mentioned reasons of heterogeneity, the absence of price competitiveness as a growth driver may be due to the negative balance sheet effects associated with real depreciations (Krugman, 1999), especially, in the light of progressed financialization which in ECEs comes also with increased foreign currency denominated debt (e.g. McCauley et al., 2015). Moreover, import dependencies may narrow the possible gains from depreciations. But furthermore, the lack of price competitiveness as a growth driver raises the question how rising income inequality and profit shares translated into growth in our sample as the common mechanism through which such redistribution fosters growth is via increased price competitiveness boosting net exports. Theoretically, higher profit shares can foster growth via inducing investment due to increased profitability. But significant empirical support for this mechanism is rare (Hein, 2014, p. 300). Alternatively, the positive relation between rising inequality and higher GDP growth might be a manifestation of *seemingly* profit-led demand (Hein & Prante, 2020). At least for the post-GFC period, the tightened connection between household credit and growth would suggest this relation of rising household indebtedness in the face of rising income inequality is one mechanism that may give rise to seemingly profit-led demand (see Kapeller & Schütz, 2015). But running regressions to assess the relation between rising profit shares and income inequality, on the one hand, and household debt on the other do not indicate such relation (see Figure A2 in the appendix).

While questions remain open in the realm of distribution, our results in terms of non-price competitiveness are more straightforward as they suggest that non-price factors drove growth, particularly in the post-GFC period. These findings are in line with the literature on economic complexity (Hidalgo & Hausmann, 2009), Thirlwall's (1979) law, and economic structuralism (e.g. Ocampo & Parra, 2006). Furthermore, in terms of the importance of non-price competitiveness, ECEs resemble DCEs (Gräbner et al., 2020; Hein and Martschin, 2021; Kohler & Stockhammer, 2021). In both periods, the most pronounced increases in that regard were made by the Asian countries while the Middle Eastern and CEE countries were less consistent and the Latin American countries performed poorly overall (Figure 5; Table 4). Conversely, our results do not contain a significant cross-country relation between GDP and commodity prices. One reason for this absence besides ECEs' heterogeneity, might be the periodization with the GFC as the breaking point. However, assessing the relation in accordance with the super cycle, i.e. choosing 2000-2014, did not alter the results (see Figure A3 in the appendix). Meanwhile, fiscal policy became more expansionary after the GFC across the sample; however, robust and significant findings for it driving growth are conditional on India's presence in the sample, given that it grew at relatively high rates accompanied by a pronounced fiscal deficit (Figure 7; Table 4).

Figure 9: Current account balances in current million US\$ of 19 ECEs and OECD member states, 1980-2019.



Sources: World Bank (2021), author's calculations and illustration. Notes: OECD member states as of June 2021 excluding the member countries that are part of our sample.

Overall, robust and significant findings for cross-country growth drivers in ECEs are sparse in our results, especially compared to the findings of Kohler and Stockhammer (2021) for DCEs. Still, our robust findings for non-price factors in driving post-GFC growth emphasize the urge brought forward by Kohler and Stockhammer to widen the concept of competitiveness within the Comparative and International Political Economy literature beyond that of price factors, even for ECEs. However, while Kohler and Stockhammer's (2021, p. 4) contribution made the case for "[shifting] the attention away from a classification of GMs toward the drivers of growth," our lacklustre findings of considerable heterogeneity among growth drivers indicate that ECEs' drivers do not necessarily change unanimously as those of DCEs. For once, this makes the case for some sort of classification based on a broader set of indicators then merely growth drivers but also demand components. Within sub-groups of the same GM, the developments in terms of growth drivers might be more homogenous. The limits of larger sample sized studies of ECEs seems to be aggravated by the multitude of factors shaping their growth trajectories. Besides the domestic and external conditions DCEs are also subject to, ECEs face further determinants given their previously mentioned subordinate integration into the global financial system. Crucially, they are subject to DCEs' GMs given their dependence on the latter's external demand, which

thus determines the feasibility of export-led GMs in ECEs. In that sense, an increase in the importance of household debt in driving ECEs post-GFC growth – for which we have seen some indications – would be expected as a form of demand compensation following the increased export-led GMs among ECEs (Hein et al., 2021) and their reduced imports, respectively (Kohler & Stockhammer, 2021). This is expressed in the worsened current accounts of ECEs vis-à-vis DCEs as visualized by Figure 9: Prior to the GFC, several ECEs ran current account surpluses matched by deficits in the DCEs. After the GFC, public demand in DCEs only insufficiently substituted the private demand drag in DCEs caused by private deleveraging. Figure 9 visualizes this with the aggregation of the current accounts of the OECD countries, excluding those that are part of our sample. 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.

6 Conclusions

We have seen that ECEs grew slower after the GFC with a trend towards worsening current account balances. In terms of robust cross-country growth drivers, our results are sparse with the exception of non-price competitiveness that drove growth, particularly, in the post-crisis period while there are no indications of price competitiveness and commodity prices in driving growth across our sample. The absence of price competitiveness as a cross-country growth driver is particularly remarkable against some indications of growth being accompanied by increasing income inequality during both periods and with falling wage shares in the post-crisis years. Against the overall further entrenchment of financialization in ECEs in terms of rising household debt, there are indications that growth has become more dependent on rising household debt in the post-GFC period, especially in the years before 2014 when ECEs experienced pronounced capital inflows fuelled by the loose US monetary policy. Similarly, fiscal policy turned more expansionary in these countries following the GFC but without becoming a robust cross-country growth driver. We argue that the absence of robust cross-country growth drivers among ECEs reflects their heterogeneity, for instance, in terms of their ‘variegated’ financialization (Karwowski, 2020) and GMs (Akçay et al., 2021). Thus, in order to understand the post-crisis trajectory of ECEs, the investigation of growth drivers should be completed by further clustering. This could be done along the lines of different demand components’ growth contributions and sectoral financial balances as in Akçay et al. (2021), financial factors (Karwowski, 2020; Fernandez & Aalbers, 2020), the importance of commodity exports or their ‘type of capitalism’ (Schedelik et al. 2021). Moreover, further research should investigate the economic policy in ECEs on this trajectory as in the macroeconomic policy-regime approach (Hein & Martschin, 2021) to shed light on the issue what ultimately determines ECEs’ GMs and what scope national strategies have in light of the multitude of dependencies ECEs face.

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Appendix

Table A1: Data definition, sources and restrictions and country abbreviations.

Variable	Definition/unit	Sources	Notes and data restrictions
Real GDP growth	Annual growth rate of real gross domestic product; percent	World Bank (2021)	
Current account balance	Sum of net exports of goods and services, net primary income and net secondary income.	World Bank (2021)	Concerning Figure 20 we have the following restrictions in data which was only available for the respective countries since the year in the parentheses: Australia (1989); Austria, Ireland (2005); Belgium (2002); China, Hungary (1982); Czech Republic, Lithuania, Slovak Republic (1993); Estonia, Latvia, Slovenia (1992); Japan (1996); Luxembourg (1999); New Zealand (2000); Russia (1994).
Household credit to GDP	Credit to households and NPISHs, from all sectors at market value, adjusted for breaks, percentage of GDP	BIS (2021a)	For the following countries only available in the restricted sense as indicated in the parentheses: Chile (2002-2019); China (2006-2019); India (2007-2019); Indonesia (2001-2019); Malaysia (2006-2019); South Africa (2008-2019)
Wage share	Labour income share (including the estimated labour income of self-employed people) of GDP, both provided in nominal terms, percentage of GDP	ILO (2021)	For all countries only available for the period 2004-2017

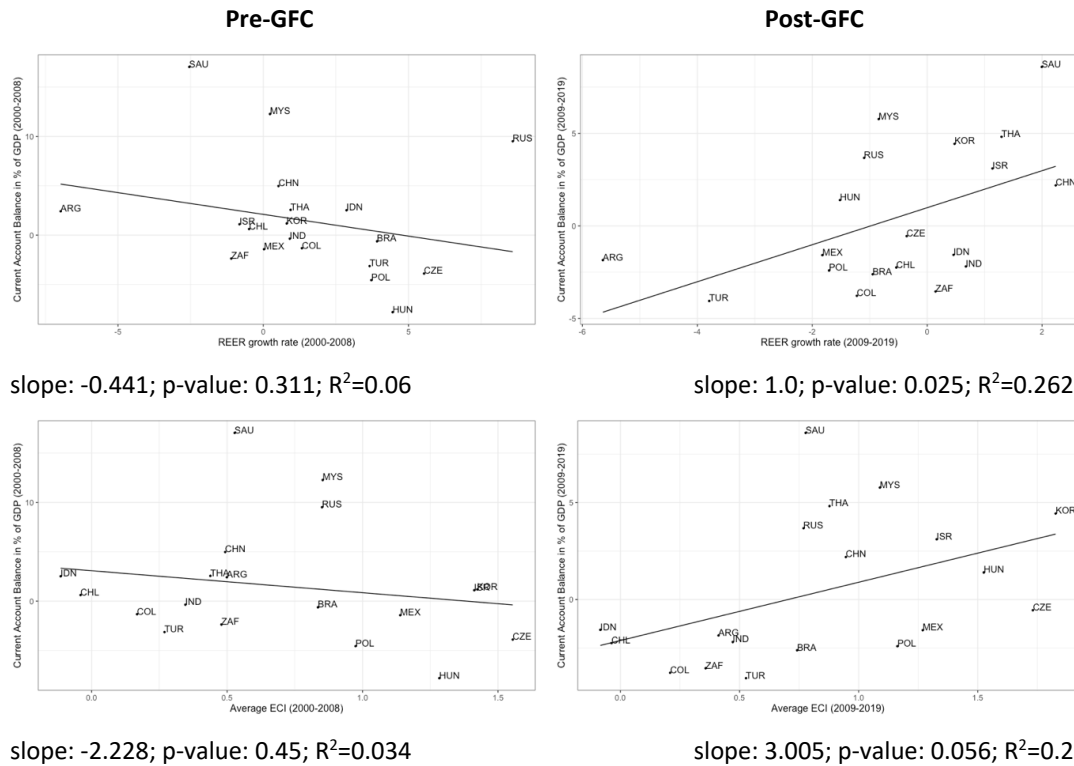
Table A1 (cont.): Data definition, sources and restrictions and country abbreviations.

Variable	Definition/unit	Sources	Notes and data restrictions
Real effective exchange rate (REER) growth	Trade-weighted (covering 60 economies) exchange rate of a country's currency on a basket of currencies, deflated using a consumer price index; annual growth rate in percent	BIS (2021b)	Increase (decrease) implies an appreciation (depreciation) and a loss (gain) in price competitiveness.
Gini of disposable income	Statistical measure of personal market income (i.e. gross income minus direct taxes) distribution ranging from 0 to 100 where higher values indicate a greater amount of income inequality and values closer to 0 a more equal distribution of income.	Solt (2020)	Only available in the following restricted sense as indicated by the parentheses: Chile (1999-2017); Czech Republic, Israel, Korea, Mexico (1999-2018); India (1999-2015); Saudi Arabia (2007-2018); South Africa (1999-2017).
Economic complexity index (ECI)	Index of an economy's technological capabilities based on export data	Observatory of Economic Complexity (OEC) (2021)	Measurement of a country's technological capabilities based on the diversity and ubiquity of its exports. The more diverse and non-ubiquitous a country's exports the higher its ECI implying more technological capabilities. For further information see Hidalgo & Hausmann (2009) or https://oec.world/en/resources/methods (accessed: 20.05.2021).

Table A1 (cont.): Data definition, sources and restrictions and country abbreviations

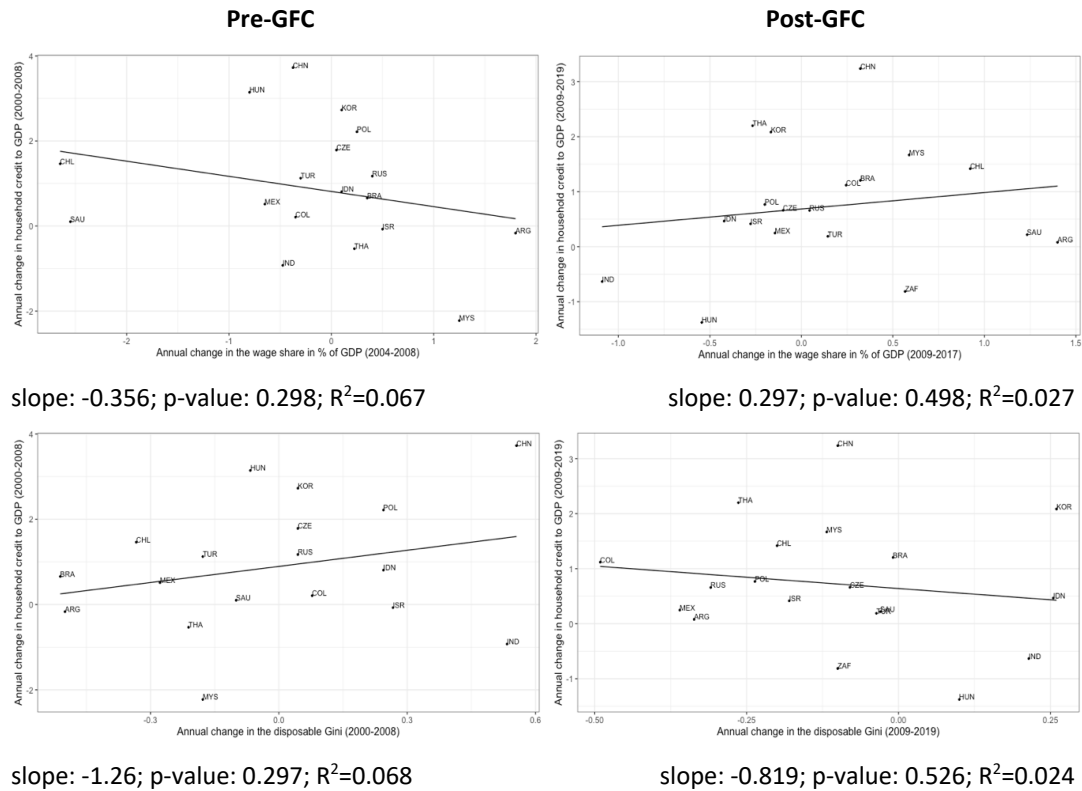
Variable	Definition/unit	Sources	Notes and data restrictions
Commodity export price index (CEPI)	Country-specific index of exported commodities' prices are weighted according to their share in the country's GDP; annual growth rate in percent	IMF (2021a)	Prices of 45 commodities are taken from the IMF's Primary Commodity Prices database. Trade flows are taken from United Nations Comtrade database. Prices are deflated using the IMF's unit value index for manufactured exports. For further information on the database and the construction of the index see Gruss & Kebhaj (2019).
General government balance	Net lending (+)/net borrowing (-) of the general government calculated as revenue minus total expenditure; percentage of GDP	IMF (2021b)	
Country abbreviations	ARG = Argentina; BRA = Brazil; CHL = Chile; COL = Colombia; CHN = China; CZE = Czech Republic; HUN = Hungary; IDN = Indonesia; IND = India; ISR = Israel; KOR = Korea; MYS = Malaysia; MEX = Mexico; POL = Poland; RUS = Russia; SAU = Saudi Arabia; ZAF = South Africa; THA = Thailand; TUR = Turkey; OECD in Figure 20 includes Australia, Austria, Belgium, Canada, Denmark, Estonia, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Latvia, Lithuania, Luxembourg, Netherlands, New Zealand, Norway, Portugal, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, United Kingdom and United States.		

Figure A1: Relationship between the current account balance and price competitiveness (upper panel) and non-price competitiveness (lower panel) for 19 ECEs before and after the GFC.



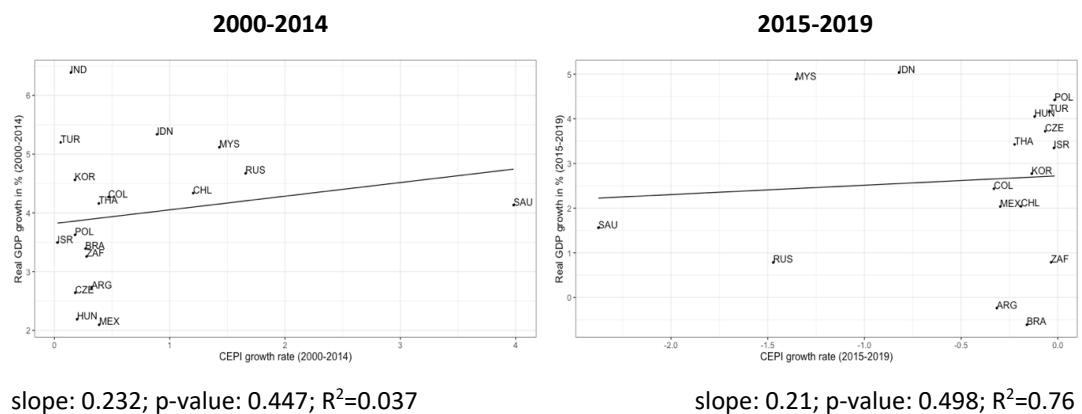
Sources: World Bank (2021), BIS (2021b) and OEC (2021), author's calculations.

Figure A2: Relationship between household credit and the wage share (upper panel) and Gini coefficient of disposable income (lower panel) for 19 ECEs before and after the GFC.



Sources: BIS (2021a), ILO (2021) and Solt (2020), author's calculations.

Figure A3: CEPI and GDP growth for 2000-2014 and 2015-2019.



Sources: World Bank (2021), BIS (2021b) and OEC (2021) (see Table A1), author's calculations. Notes: China as the most pronounced outlier was excluded in both periods, as well as India in the second as an equally pronounced one.

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