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EXPORTING DIFFERENTLY? THE POLITICAL ECONOMY OF ALTERNATIVE EXPORT-LED STRATEGIES

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ABSTRACT

The paper enters the current debate at the intersection of comparative political economy and international trade on the role of price and non-price competitiveness in influencing export. Through an econometric exploration, we identify price competitiveness as a non-negligible factor in driving export, for a set of OECD countries from 1994 to 2019. The documented price sensitiveness, combined with the institutions and policies adopted to promote export-led growth, casts an unsettling light on the prospects for a recovery, particularly for the Euro area. These worrying conclusions are not, however, unescapable. The emergence of the export-led growth model – with its twin brother, the debt-led one – answered the demand-generating problems created by years of wage share decreases and a steady retreat of the State from its traditional demand management role. Drastically inverting these tendencies would contribute to strongly narrowing the need for export-led strategies.

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Exporting differently?
The political economy of alternative export-led strategies

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Abstract

The paper enters the current debate at the intersection of comparative political economy and international trade on the role of price and non-price competitiveness in influencing export. Through an econometric exploration, we identify price competitiveness as a non-negligible factor in driving export, for a set of OECD countries from 1994 to 2019. The documented price sensitiveness, combined with the institutions and policies adopted to promote export-led growth, casts an unsettling light on the prospects for a recovery, particularly for the Euro area. These worrying conclusions are not, however, unescapable. The emergence of the export-led growth model – with its twin brother, the debt-led one – answered the demand-generating problems created by years of wage share decreases and a steady retreat of the State from its traditional demand management role. Drastically inverting these tendencies would contribute to strongly narrowing the need for export-led strategies.

Keywords comparative political economy; export; export-led growth; price competitiveness; non-price competitiveness; economic crises.

JEL classification E02 Institutions and the Macroeconomy; P16 Political Economy; O57 Comparative Studies of Countries

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1. Background and rationale

The pandemic-induced economic collapse has, to a large extent, overshadowed the long-lasting phase of stagnation in which several European countries, and in particular the Mediterranean ones, were stuck in well before the outbreak of the Covid-19 emergency. Many scholars have been wondering about the possible causes of such sluggish growth, trying to understand, among other things, what has prevented European countries from recovering after the great financial crisis of 2007–09 (henceforth, GFC). While conventional explanations focus predominantly on the supply side and tie stagnation to the slowdown of productivity, several contributions at the intersection of Comparative and International Political Economy (henceforth, CPE and IPE) and post-Keynesian economics have started to propose a radically alternative narrative, systematically analyzing the demand side of the economy and providing a novel interpretative framework to compare and contrast capitalist economies. In studying the current features and the evolution of contemporary capitalism, this strand of literature indicates that while "economic, social, and political factors have to be analysed in conjunction," economic systems should not be examined through the lens of economic theory uniquely (Stockhammer, 2021, p. 2). And indeed, essential ingredients of this approach are power relations, the potential effectiveness of government interventions, the processes of financialization and globalization, the interactions among social blocs - with important implication for electoral outcomes[1] - and the analysis of the institutional framework. One of the more interesting intuitions of this novel approach can be sketched as follows: after several decades of wage share decline and a drastic reduction of the role of the State in the economy, with the ensuing demand-generating problems, advanced economies have faced – and still face – the challenge of finding new engines for growth. The issue favored the birth of the 'growth model perspective', baptized by the seminal work of Baccaro and Pontusson (2016). According to this view, two main strategies have emerged, which correspond to two broadly defined (demand-led) growth regimes. On the one hand, there are countries where debt-financed (private or public) domestic demand turned out to be the main driver of growth, and hence opted for policies stimulating internal sources of demand, such as credit-driven households consumption or government expenditure.[2] On the other hand, there are countries that relied on external demand as the very growth locomotive, and that promoted export in different ways, such as containing wage inflation and/or incentivizing export-oriented sectors, at the cost, at least in some cases, of hindering domestic demand and further altering the distribution of income in a regressive sense.

Following this innovative scheme of investigation, many attempts have been made to nudge CPE toward demand-oriented analyses of growth models, and at the same time to pinpoint and discuss both the implications for economic policies and the outcomes of different models in terms of growth drivers and income distribution (see, among others, Setterfield and Kim, 2020; Behringer and Van Treeck, 2021; Hein et al., 2021; Kohler and Stockhammer, 2021; Baccaro and Tober, 2021; Morlin et al., 2022).

Within this theoretical context, a segment of the literature has focused its efforts on the investigation of the reasons for the success of foreign trade in the so-called 'export-led' countries. This paper wishes to contribute to this specific debate, as it highlights how some layers of controversy have emerged here: on the one hand, some studies emphasize price and cost competitiveness, measured through the real effective exchange rate and/or (relative) unit labor costs, as a key factor of export growth; on the other hand, other contributions ascribe the huge external performance of export-oriented countries (first and foremost, Germany) largely to non-price factors, such as product quality, diversification and the composition of export. For this purpose, we start from the recent evidence stemming from some works belonging to the CPE/IPE tradition, and we extend that by proposing an econometric exercise aimed at estimating, for a set of high-income countries,

[1] See Baccaro and Pontusson (2019) and Hall (2020).

[2] Of course, these two sources present different degrees of sustainability: the former has proved to be highly unstable (Boyer, 2000; Barba and Pivetti, 2009; Pariboni, 2016); while the latter may ensure sustainable growth paths (see, e.g., Allain, 2015; and Hein, 2018) in case central banks unconditionally support full-employment policies put in place by governments. The second strategy, accordingly, has been predominantly followed by countries which are not subject to constraints in fiscal policy.

the role of price and non-price competitiveness as export drivers. In a nutshell, according to our results (also) price competitiveness matters in influencing export in mature economies, partially in contrast with some of the existing empirical literature. Nonetheless, our research does not presume to reply to the complex answer 'which is the relative importance of price and non-price factors for each country', as this would need a country-specific estimate of exports' price and non-price sensitivity. Having this caveat in mind, however, our findings would be of help in drawing some policy implications related to the neo-mercantilist behavior of some countries and, more in general, to the need for a reversal of the trends in income distribution and for a renewed commitment of governments to demand management.

The rest of the paper goes as follows. In Section 2, we discuss the role of export in the CPE literature. In Section 3 we introduce the concepts of price and non-price competitiveness and how they may relate to different models of capitalism. In Section 4, we examine the recent contributions on the relevance of price and non-price competitiveness, paying attention also to the controversial case of Germany. In Section 5, we extend the work by Kohler and Stockhammer (2021) on price and non-price competitiveness to export growth. Section 6 is devoted to the empirics: for a panel of OECD countries, we estimate the role of cost/price and non-price factors employing export equation-based modeling. Section 7 concludes and draws the policy implications consistent with our findings.

2. Export, comparative political economy and the growth model perspective

European countries represent a privileged and paradigmatic observation point to understand some broader tendencies that have been simmering in the past decades in most advanced economies. At the macroeconomic level, we witness poor economic performances of both 'core' and 'peripheral' countries belonging to the Euro area (even more accentuated in the latter), which are feeding the uncertainty on the growth-promoting ability of the existing rules and institutions.[3] Nonetheless, that puzzle has been often regarded as the quasi-natural outcome of the coexistence of differentiated models of capitalism under the same umbrella, as it is rather clear in the words of Gambarotto and Solari (2015) who describe Europe "as a set of asymmetrically integrated variety of capitalism" (p. 788). Furthermore, it has been shown that the Eurozone and its main member countries are featured by a dominant tendency towards export-led mercantilism, an element that may contribute to rising global macroeconomic risks (Hein, 2019).

Concerning the topics of this work, that is export and competitiveness, CPE sets the table in a quite plausible way, starting from the premise that two types of countries - in terms of wage-setting institutions and, consequently, growth regimes - have joined the economic and monetary union. On the one hand, highly competitive export-led economies with coordinated bargaining systems capable of producing wage restraints and keeping inflation low, that are mainly represented by Continental and Northern European countries. On the other hand, domestic demand-driven economies fostered by bank credit or the housing sector, such as Mediterranean countries, that are characterized by uncoordinated wage bargaining schemes and a structurally higher pace of inflation. Both models would present some elements of risks even by themselves, and indeed several works have highlighted the instability of pure export-led and debt-driven growth models in the form of rising export dependence and financial fragility (Lavoie and Stockhammer, 2013; Stockhammer, 2016; Pariboni et al., 2020). Further troubles arise, however, from the combination and the coexistence of the two models, since one feeds into the other, with the result of the crystallization of an inherently unstable equilibrium in which the dualism between export-led and (debt-financed) consumption-led economies mimics and reflects, at the European level, the North-South asymmetry (Iversen et al., 2016; Nölke, 2016; Hall, 2018; Baccaro and Tober, 2021). For this reason, the elaboration on different institutional settings, as

[3] Many observers interpreted the European crisis from a core-periphery perspective (cf. Celi et al., 2018). In some cases, this conundrum resulted in scepticisms on the whole project of European integration. For a discussion, see Cohen (2012).

well as on the alternative determinants of growth, has become central in CPE/IPE studies focused on Europe and advanced economies at large.

Initially, the study of differentiated models of capitalism has generally been couched on mainstream underpinnings, concerned with microeconomics and the structural supply-side features of the economy, as well as on the standard New Keynesian 3-equations model. The fundamental outcome of this approach, which has been subsequently extended to institutionalism from a historical, political, and sociological perspective, giving birth to the literature on 'comparative capitalism' (see among others Schmidt, 2002; Amable, 2003; Hancké et al., 2007; Nölke, 2016), is the archetypal dichotomy identified by the Varieties of Capitalism (VoC) approach, which is a distinction between coordinated market economies (CME) and liberal market economies (LME) (Hall and Soskice, 2001) – which may also encompass the existence of a hybrid model consisting of mixed market economies (MMEs) (Hall and Gingerich, 2009; Hall, 2015).

Recently, however, significant efforts have been made at connecting the existing CPE/IPE approaches with non-mainstream, macroeconomic research on different growth regimes in modern capitalism.[4] The work that kicked off the debate is Baccaro and Pontusson (2016). The main innovation of this approach, as the authors emphasize the demand side of the economy and place the distribution of income, among households and between labor and capital, at the center of the analysis, was "to return to Keynesian and Kaleckian insights neglected by CPE scholars" (p. 2). Specifically, they use the distinction between consumption-driven and export-driven regimes to question the relevance of the VoC dichotomy between CMEs and LMEs for the period prior to the GFC. A similar attempt can be found in Behringer and Van Treeck (2021), who use the VoC approach to explain the different dynamics of macro-variables (consumption and net exports), which generated debt-led consumption-driven or export-driven regimes before the GFC. With a similar spirit, Hein et al. (2021) develop a taxonomy of (demand-led) growth models by distinguishing four regimes before and after the GFC, namely export-led mercantilist, weakly export-led, domestic demand-led and debt-let private demand boom.[5] Despite some methodological differences, these contributions endorse a demand-side perspective and emphasize the role of export as a component of aggregate demand in shaping the growth model of a country.[6] With a certain degree of generality, a country is export-oriented in case export turns out to be the most important driver of growth.

Starting from this common ground, a lively debate on the determinants of export has involved several authors within this strand of literature, and this is the object of the next section.

3. Price and non-price competitiveness: an overview

Here we come to the term competitiveness, a multifaceted concept used to identify a potential determinant of export success. While acknowledging that export would not exist without demand from abroad, it is quite natural to wonder why a country sells more or less on international markets for given levels of foreign demand. The question is important as alternative answers would shape different strategies to foster export. We find of interest the elaboration on competitiveness not only from an international trade perspective, but also from a political economy standpoint. Indeed, the distinction between price and non-price competitiveness – and more importantly the relative sensitiveness of export to them – can give us insights into the connection between export performances, on the one side, and the institutional setting and the

[4] The interested reader may refer to Baccaro and Pontusson (2016; 2018), Martin (2016), Piore (2016), Streeck (2016), Behringer and Van Treeck (2021), Stockhammer (2018), Stockhammer and Ali (2018), Baccaro and Tober (2021), Hein et al. (2021), Kohler and Stockhammer (2021), Morlin et al. (2022). Recently, Stockhammer (2021) and Stockhammer and Kohler (2022) have also provided a post-Keynesian view on political economy.

[5] In addition to distinguishing between 'strong' and 'weakly' export-led, the work also discerns different sources of demand of domestic demand-driven economies: in domestic demand-led countries, government is the main source of demand; while in debt-let private demand boom, consumer credit is the predominant driver of growth.

[6] Hein et al. (2021) offer a discussion on such methodological discrepancies (to give an idea, some contributions focus on export growth, while others on the dynamics of net exports).

patterns of the distribution of income, on the other side. Not surprisingly, the role of competitiveness is widely acknowledged within the CPE literature, in the analysis of institutional conditions rendering domestic firms internationally competitive, and in the differences in competitiveness which have been highlighted as a driver of the external imbalances (see among others Johnston et al., 2014; Hall, 2014; Iversen et al., 2016; Mirò, 2021). In what follows, we shall discuss how the two types of competitiveness are interpreted and represented in the current literature.

3.1. Price competitiveness

Price competitiveness is usually captured by the dynamics of the real effective exchange rate (REER) leveraging on unit labor cost (ULC) as a measure of cost competitiveness. In particular, the REER adjusts the nominal exchange rate for the relative rate of inflation, and therefore it is an indicator of the international competitiveness of a nation in comparison with its trade partners[7]. Notably, price and cost factors are supposed to be relevant in shaping export in case the price elasticity of export is high. This issue becomes central in the growth model literature as increasing domestic demand (for instance, increasing consumption fuelled by a shift in income distribution in favour of workers) may increase domestic prices, and this would – at least partially – translate into a real appreciation. In the event of export being sensitive to changes in prices, increasing internal demand would therefore penalize the external source of demand. On the contrary, if export was not (very) sensitive to price changes, it would not be affected (very much) by a loss of price competitiveness. Putting it differently, strong price sensitivity of export may indicate an inverse relationship between consumption and export, and this trade-off would work in case of both an increasing domestic demand, which would generate inflation and therefore crowd out export, and a decreasing one, which would generate a relative depreciation and therefore trigger export. Before reviewing the existing research, an element of evidence has to be pointed out: as it is widely recognized, after the inception of the Euro countries like Germany managed to keep wage inflation under control – according to Brancaccio (2011), as a result of a coordinated wage-setting system – while countries belonging to the MMEs ring, like Spain, experienced a loss in international price competitiveness due to comparatively high inflation, associated also to higher domestic demand and housing/financial bubbles in the pre-crisis period (Cesaratto and Stirati, 2010; Paternesi Meloni, 2017).

3.2. Non-price competitiveness

Non-price competitiveness represents a more nuanced feature of export that may be difficult to represent synthetically. Generally, it captures the quality and sophistication of exported goods. D'Amato (2017) argues that non-price competitiveness identifies factors "which encompass many of the facets driving export performance beyond prices and foreign demand" (p. 37), and includes quality, tastes, participation in global value chains, logistics services and infrastructure in general, and institutional factors. Essentially, non-price competitiveness should be, at least in principle, able to stimulate export *independently* of prices: in other words, countries that compete on quality would experience significant export performances even in the presence of relatively high prices, as their goods are sophisticated enough to be sold in the international outlets. Because of its nature, non-price competitiveness is quite complicated to translate into a single metric.[8] Probably the most widespread one is the Economic Complexity Index (henceforth, ECI), built in the spirit of the seminal work by Hidalgo and Hausmann (2009). According to their approach, a country that has

[7] As well-known, the ULC represents a measure of cost inflation, as it compares a country's wages and productivity, and consequently it is generally viewed as a measure of cost competitiveness as it indicates the average cost of labor per unit of output produced.
[8] A far-reaching survey has been proposed by Xifré (2021).

a diversified export basket and that exports items that few other countries can produce will get a high ECI score, and therefore it is featured with higher sophistication and non-price competitiveness.[9]

4. Latest findings on the relevance of price and non-price competitiveness

Regarding this twofold facet of competitiveness, the debate is very lively, and "it is still unclear how decisive prices and costs are for export performance compared with non-price factors" (Tober, 2021, p. 19). With a certain degree of generality, two chief positions emerge. On the one hand, some authors emphasize the role of price competitiveness and wage inflation in altering the export performances of a country. With particular reference to the CPE family of works, Baccaro and Pontusson (2016) argue that differences among countries have to be found in the different structure and price elasticities of their exports: specifically, German exports, mainly consisting of high-quality (but standardized) manufactured goods, have been highly price-sensitive, and hence benefited from the slower pace of (wage) inflation experienced in Germany compared to other major European economies.[10] On the other hand, other observers accentuate the role of non-price factors compared to cost competitiveness, stating for example that the leading cause of trade imbalances within the Eurozone has to be found in the fact that, before the GFC, peripheral countries were specialized in low-productivity and low-value-added branches, while core countries were more oriented to innovative sectors and thereby occupied the highest value-added segments of the international markets (among others, Simonazzi et al., 2013; Storm and Naastepad, 2015a; 2016; Celi et al., 2018).[11]

Concerning the relevance of non-price factors, the VoC literature indicates that, due to their institutional features, CMEs belonging to the Center-North of Europe are better equipped to foster (incremental) innovation in high-quality manufacturing, due to higher skills and competencies, vocational training, oriented education systems and inter-firm relations. These elements would be able to promote product superiority (Hall and Soskice, 2001; Iversen and Soskice, 2013) and the ensuing competition on high-end items.[12] By contrast, Southern European economies, supposed to be featured by a more uneven system of skill formation, are therefore more prone to producing and exporting low-to-medium-quality goods.[13] An even stronger conclusion comes from Storm and Naastepad (2015b; 2016), who argue that price elasticities of major Eurozone countries are virtually zero, while net exports are mostly driven by domestic and foreign demand. Other contributions advocating the relevance of non-price factors are, among others, Danninger and Joutz (2007), Simonazzi et al. (2013), and Carrasco and Peineado (2015).

On the other side of the spectrum (that is, for what concerns the relevance of price factors in stimulating export), some contributors vindicate the existence of high price elasticities of export also for advanced economies, and particularly for European manufacturing countries. Among them, Keil (2022) has recently found that price elasticity is significant (and negative) for eight out of the eleven mature economies under scrutiny, in his estimation of different export equations at the country level. Other works belonging to the

[9] Other proxies for non-price factors are based on different grounds, such as the effort in research and development (R&D) and the ensuing number of patents, the dimension of the so-called 'matrix' of production (being a large number of produced items a signal of high non-price competitiveness), the technological sophistication of export, and so forth. Despite that variety, all measures share the same message: competitiveness goes well beyond the price of the product, and therefore export cannot be explained uniquely by employing (the pace of) prices and foreign demand.

[10] The authors also analyze the case of Swedish export, which mainly consists of high-quality services and hence has been far less price elastic.

[11] In this regard, the recent work by Xifré (2021) swims against the tide, arguing that that the conventional North-South divide in the Euro area does not exactly mirror the price price vs. non-price competitiveness dualism. For instance, it is argued that Spain has significantly improved its non-price competitiveness in recent times, and this partially explains the so-called 'Spanish paradox' (that is, increasing export share, combined with worsening price competitiveness).

[12] The idea behind this reasoning is that CMEs' workers tend to have industry-specific competences, while in LMEs they have more general skills that easily can be utilized to work at other firms. Countries in the Mediterranean ring would therefore be more oriented to compete on cost than Continental European countries, where corporate governance is also less inclined to short-termism.

[13] See on this also De Ville and Vermeiren, 2014, p. 8; Vermeiren, 2014, p. 102 and Vermeiren (2017), according to whom high-quality goods (that is, the ones that are mainly exported by Northern economies) tend to be almost completely price-inelastic.

non-mainstream tradition and that underline the relevance of price competitiveness in the Eurozone framework are Flassbeck and Lapavitsas (2013), Bibow (2013) and Boggio and Barbieri (2017), with the latter arguing that export performances have to be explained by levels rather than by changes in unit costs.

In trying to analyze the two different aspects of competitiveness, Kohler and Stockhammer (2021) assess the correlation between income growth or the current account, on the one side, and price competitiveness (ULC-based REER, an increase meaning a real appreciation and therefore a loss of price competitiveness) and export sophistication (where a higher score of the ECI represents higher non-price competitiveness), alternatively, on the other side. That is done for both the pre- and the post-GFC period, focusing on a set of 30 OECD countries which predominantly includes European economies. Probably due to the large heterogeneity among countries, the evidence is quite mixed: the only significant correlation that is consistent with the expectations is the positive one between the current account and non-price competitiveness, both before (1% level) and after (at the 5% level) the GFC. Consequently, the take-away message from their work is that non-price factors are more relevant than price factors; this is confirmed by no significant association between the dynamics of the ULC-based REER and the current account.

Nevertheless, Kohler and Stockhammer (2021) do not estimate any effect of price and non-price factors on export performances. An attempt to quantify the sensitiveness of export to price factors has been made by Baccaro and Pontusson (2016): the authors vindicate the relevance of price competitiveness for two big manufacturing European economies, namely Germany and Italy (with REER elasticities of −0.48 and −0.65, respectively), and state that "to the extent that exports are price-sensitive, growing exports requires the repression of wages and consumption to prevent an appreciation of the REER" (p. 15). To support this view, they present some empirics indicating that the growth rate of export is negatively associated with the real appreciation for Germany and Italy, while Sweden and the United Kingdom, by contrast, do not present any significant effect of price competitiveness on the pace of export. According to the authors, this is not consistent with the view of Germany's export success based on high value-added and superior quality, as posited by the advocates of non-price competitiveness. In a similar vein, Baccaro and Tober (2017) argue that wage moderation is at the root of German gains in competitiveness (with price elasticities ranging from −0.8 and −1.2, depending on the deflator used), even though such moderation happened mostly in the non-exposed sectors (but to some extent also in the manufacturing).[14] From a different angle, the relevance of price competitiveness for the German exports' success is backed also by the empirical evidence presented in Tober (2021). The author tracks the evolution over the 1980s and 1990s of German businesses' stance toward the EMU, finding evidence of a significant shift taking place in the second half of the 1990s, in conjunction with the strong real appreciation of the Deutsche mark of those post-unification, post-EMS troubles years: the up to that point mild, at the best, support for the process of adoption of a single currency rapidly turns into a majority approval. Tober's interpretation points to the German export sector's understanding of the competitive implications of the EMU, with its promise to "to enhance the price competitiveness of German exports" (Tober, 2021, p. 7).

Within the debate on the relative relevance of price and non-price factors, Germany represents the bone of contention – for discussion, see Baccaro and Höpner (2022). Concerning the competitive advantage of the core countries, wage devaluation in Germany after the inception of the Euro is generally acknowledged. That had been possible due to the coordinated wage bargaining system and the ongoing and prolonged weakening of unions' bargaining power (Nölke, 2016) and it was implemented through structural reforms belonging to the Schroeder Agenda, which mainly consisted of labor market flexibilization (Hartz reforms) initiated in 2003

[14] This point should be however analyzed at the country level, as sectoral deflators may exhibit different trends. For instance, Italy experienced a higher-than-average pace of inflation in non-tradeable sectors (first and foremost, in utilities), and this probably translated in increasing prices in the manufacturing for two reasons: on the one hand, some services are inputs of production; on the other hand, some services (e.g., utilities) account for a considerable extent in the consumer basket, and therefore their prices are likely to influence monetary wages. See on this Levrero and Stirati (2005).

with "several tripartite negotiations in an attempt to lower wage growth and to restore price competitiveness." These measures, however, "essentially led to wage deflation", while "little was done to restore competitiveness through increases in productivity" (ILO, 2021, p. 46).[15] Brancaccio (2011) argues that wage deflation was the consequence of a long phase of changes in industrial relations, during which trade unions agreed to higher employment at the cost of lower wage growth.[16] By opposition, other contributors argue that the institutional configuration of Continental European countries fostered competitiveness not by allowing wage moderation, but inasmuch it is more appropriate (than the one of Southern European countries) to fuel innovation and promote product quality. In this way, the export-led economies of the core (we can refer to Germany here, which is a textbook case within the literature) may have benefited not only from the currency peg (which in some cases made it possible to gain price competitiveness), but also from higher non-price competitiveness. To give an idea: in this regard, Storm and Naastepad (2015a; 2015b) claim that the German institutional setting does matter because it strengthens non-price competitiveness, and not because it produces wage moderation.

The empirical counterpart of this debate is the literature on German export's price sensitiveness. Many studies find significant price or cost elasticities for Germany's export.[17] A seminal work by the European Commission (2010, chapter 4) documented high sensitivity of export to prices (−0.83) for the period 1980–2008.[18] Among other observers, Baccaro and Benassi (2017) find negative price elasticities for the export of manufactured items, although the authors refer to short-run coefficients (−0.4 for ULC-based REER and −0.8 for export prices). Thorbecke and Kato (2012) and Keil (2022) estimate a long-run elasticity to ULC-based REER of about −1 across specifications. Similarly, Baccaro and Höpner (2022) find significant price sensitiveness (−1 for goods and −0.8 for services) and a central role for demand coming from the Eurozone in shaping Germany's export. Neumann (2020) indicates that a real appreciation negatively affects German export outside the Eurozone, while a non-significant effect is found for intra-Eurozone flows (where strong demand effects are detected). However, the work by Storm and Naastepad (2015a; 2015b) represents an against the current position, as they detect insignificant cost elasticities: this finding is interpreted as the consequence of Germany's relevant strength in terms of its corporative industrial framework and technological level which promote product innovation and quality, making therefore its export insensitive to changes in prices. In a similar vein, Herrero and Rial (2022) recognize a significant wage moderation in services but conclude that the main driver of German export was the extent and integration of knowledge-intensive business services (that is, non-price elements).

A similar discussion regards also Mediterranean countries. Concerning Italy, Baccaro and Tober (2017) find an important role of price competitiveness for export, whose elasticity is estimated at −1.5. That is in line with Paternesi Meloni (2018) and Baccaro and Bulfone (2022), who estimate a price elasticity of export ranging from −1.1 and −1.5. By contrast, Breuer and Klose (2015) did not find a significant price effect. For Spain, Xifré (2021) argues that the recent increase in export shares relates to increased non-price competitiveness, albeit price competitiveness has worsened. The non-relevance of price factors for Spain has been also supported by Villanueva et al. (2020), according to whom the strategy of internal devaluation contributed to the external readjustment mainly through the decrease in domestic demand and imports, rather than through enhanced price competitiveness.[19] By contrast, Baccaro and Bulfone (2022) report a

[15] On this point, see also Nölke (2016).

[16] Nonetheless, Germany's employment growth consisted to a great extent of part-time and temporary contracts (Benassi, 2016; Baccaro and Benassi, 2017). Barba (2016) claims that the German government played a role in the process of wage deflation: the diffusion of temporary jobs, and the ensuing reduction in the labor compensation paid by firms, has been mitigated (for about two-thirds) by lower social security contributions to be paid by workers.

[17] For surveys, see Heinze (2018) and Herrero and Rial (2022).

[18] The same research reports significant price elasticities also for Italy (−1.72), Spain (−1.31), France (−1.18) and Austria (−0.82).

[19] At the same time, according to Álvarez et al. (2019), the policies of internal devaluation implemented in Spain detracted an average of 0.2 percentage points of annual economic growth during the period 2009–17.

price elasticity of −1.3 for exported Spanish goods, while a lower one holds for services (−0.4), which however account for one-third of country's export. For Greece, Athanasoglou and Bardaka (2010) provide contrasting evidence: they state that non-price competitiveness plays a vital role for Greek export, but at the same time estimate a price elasticity of −1. Mixed results arise also for Portugal: using firm-level data, Adamczyk and Westmore (2020) find significant price effects; at the same time, they argue that most of the increase in export can be explained by quality and poor domestic demand (with the latter that prompted firms to increase their focus on foreign markets). Extending the analysis to Central and Eastern European (CEE) countries, Ban and Adascalitei (2022) estimate a negative price elasticity only for Slovenia and Slovakia, while it is virtually null in the other countries belonging to the area. Combined with a negative (and significant) price elasticity estimated for Germany (about −2), this finding contrasts the idea that these economies are specialized in low value-added breaches, which are habitually considered more price elastic.

This debate has still not reached a conclusive result. We contend that the role of price and non-price competitiveness derived from estimates of export elasticities present several shortcomings that should be deepened and merit discussion right away. In most cases, the empirics presented to quantify price elasticity suffer from under-specification. This is, for instance, the case of Baccaro and Pontusson (2016), as their analysis does not consider the evolution of foreign demand. Another source of problems is methodological, as appropriate techniques capable of depicting structural, long-term relationships through cointegration-based methods should be preferred to short-run correlations (for a discussion, see Paternesi Meloni, 2018). The two aspects are partially addressed by Baccaro and Tober (2017), who estimate long-run export equations, although for a limited set of countries. As an additional weakness, non-price factors are not directly included within the empirics, while the relevance of non-price competitiveness is basically documented by a combination of low price sensitivity and relatively high elasticity to foreign income (as it happens, for instance, in Neumann, 2020).

5. A first empirical test starting from Kohler and Stockhammer (2021)

Within the CPE/IPE empirical literature of post-Keynesian inspiration, the article by Kohler and Stockhammer (2021) is the only attempt to explicitly include non-price competitiveness in the picture.[20] This is why we engage directly with that work, even if the argument can be inserted in the broader controversy over which are the main determinants of the export performance of a country. As discussed in the previous section, they make use of an index of export sophistication (the ECI), which is capable of jointly considering the diversity of a country's exports (the number of distinct products it exports) and their ubiquity (the total number of countries that export these products).

Kohler and Stockhammer find a positive correlation between export sophistication and the current account (CA), while no significant correlation holds between sophistication and income growth. Moreover, they do not find any statistically significant association between the dynamics of the ULC-REER and that of real income, both before and after the GFC.[21] Perhaps more importantly, despite the relation unexpectedly becoming positive and significant, albeit only at the 10% level, for the period after 2008, they find a negative but not significant relationship between the pace of the ULC-REER and the CA before the GFC.

While the intuition is promising and the exercise merits attention, there are at least two problematic aspects that deserve discussion: the first one is related to the fact that the authors only perform correlation-based analyses, and not a fully-fledged empirical investigation of the issue under scrutiny. The next section of this article is devoted to overcoming this limitation. The second one is that the authors link the indices of

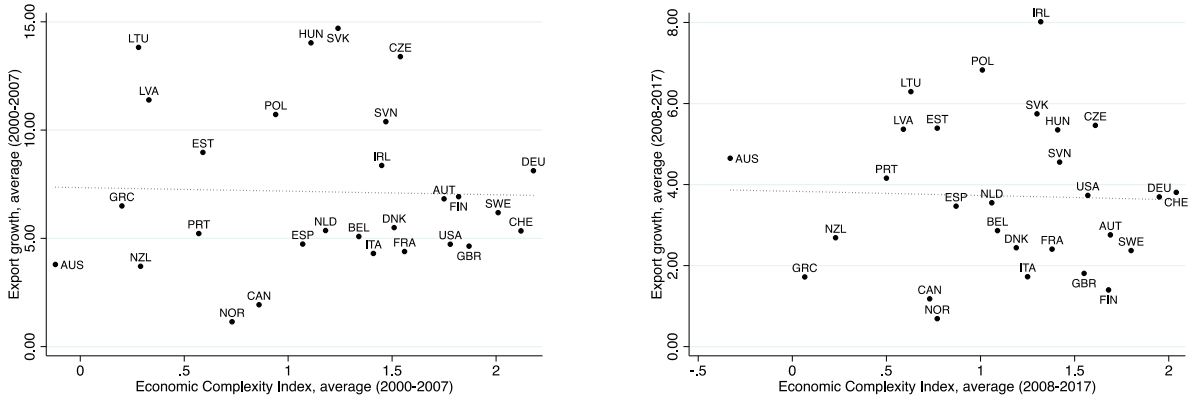
[20] Another work trying to encompass the role of non-price factors is the one by Gräbner et al. (2019).

[21] Surprisingly, they find a negative, statistically significant association between ECI and real GNI growth before the GFC (at the 5% level), which however turns out to be insignificant after 2008.

competitiveness (both ULC-based REER dynamics and ECI scores) to aggregate indicators, such as the average growth rate of the real gross national income (GNI) and/or the CA.[22]

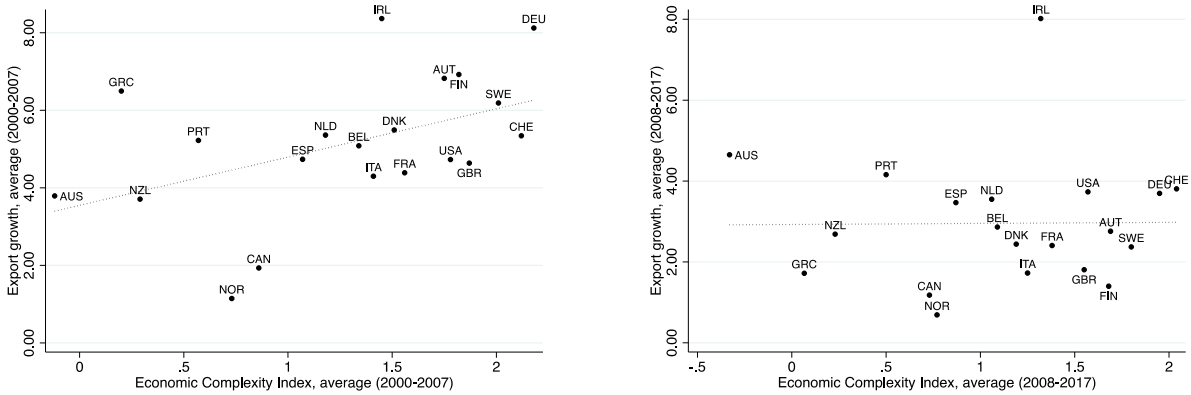
Figure 1. Non-price competitiveness and export performances before and after the GFC

Whole panel



Correlation = -0.02 *Correlation = -0.03*

Excluding CEE and Baltic countries



Correlation = 0.47 *Correlation = -0.01*

Export data extracted from World Bank (WDI dataset). ECI data from Kohler and Stockhammer (2021). Data on ECI not available for Iceland and Luxembourg. Source: own elaboration.

Caption: AUS = Australia; AUT = Austria; BEL = Belgium; CAN = Canada; CHE = Switzerland; CZE = Czech Republic; DEU = Germany; DNK = Denmark; ESP = Spain; EST = Estonia; FIN = Finland; FRA = France; GBR = United Kingdom; GRC = Greece; HUN = Hungary; IRL = Ireland; ISL = Iceland; ITA = Italy; LTU = Lithuania; LUX = Luxembourg; LVA = Latvia; NLD = Netherlands; NOR = Norway; NZL = New Zealand; POL = Poland; PRT = Portugal; SVK = Slovak Republic; SVN = Slovenia; SWE = Sweden; USA = United States.

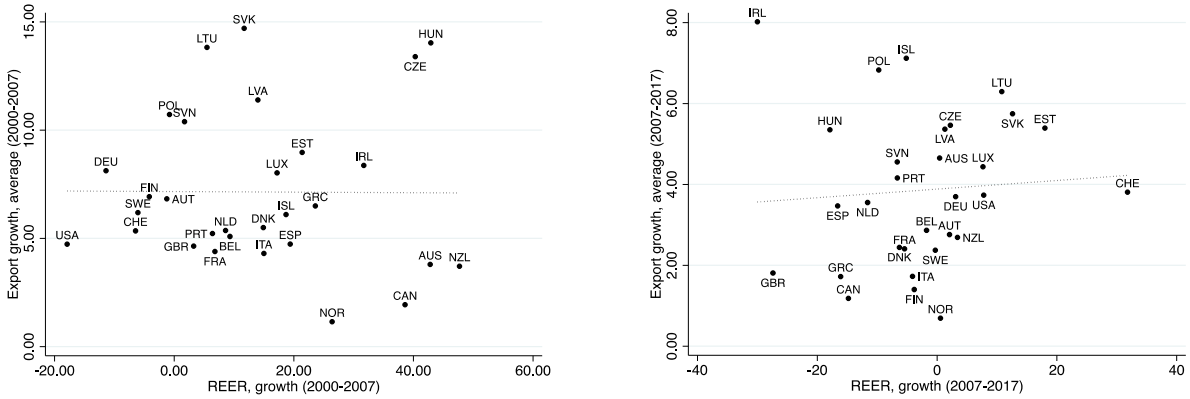
Nevertheless, price and non-price competitiveness should be put in connection with export uniquely, as competitiveness should in principle act upon export dynamics, and only indirectly upon other aggregate indicators such as income growth. By linking competitiveness to the growth rate of the GNI (and not to that of export), one may find spurious relationships. For instance, if export is triggered by improving cost competitiveness (that is, by a lower ULC, which is almost equivalent to a decrease in the wage share), with the latter associated with a restrain in internal demand, this may result in a domestic/foreign demand trade-off, with no effects on income growth (as discussed in Section 4). Analogously, competitiveness should not

[22] Most likely, this depends on the fact that Kohler and Stockhammer's (2021) article is centered on the drivers of GDP growth, and not on the drivers of export. Indeed, their analysis refers also to finance and fiscal policy as further drivers of growth.

be linked to the CA inasmuch this latter includes also import: being the latter endogenous to income, as Kohler and Stockhammer note about Hein et al. (2021), this may pollute the overall analysis.[23]

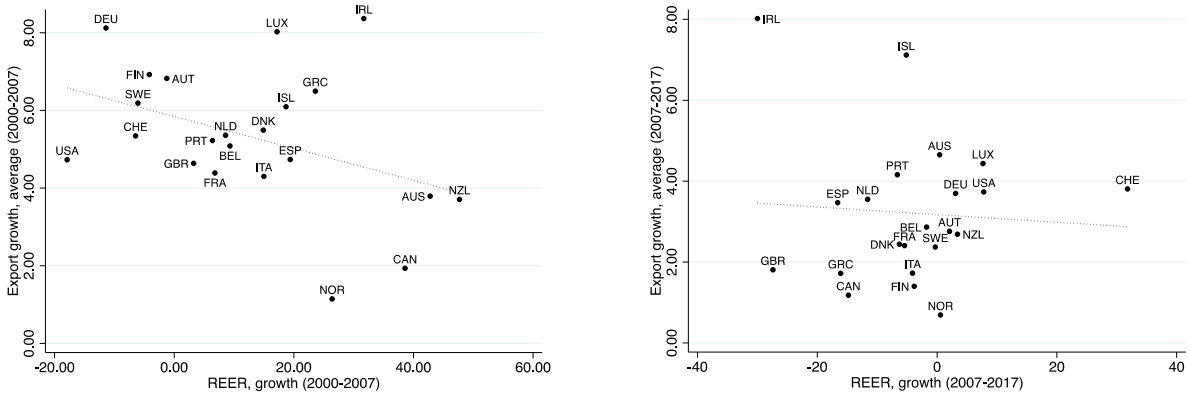
Figure 2. Price competitiveness and export performances before and after the GFC

Whole panel



Correlation = -0.01 *Correlation = 0.07*

Excluding CEE and Baltic countries



Correlation = -0.40 *Correlation = -0.06*

Export data extracted from World Bank (WDI dataset). REER data from Kohler and Stockhammer (2021). Source: own elaboration. Caption: see Figure 1.

The picture changes when directly linking competitiveness indicators (representing both price and quality) to export. First and foremost, the positive association between export growth and sophistication virtually disappears for the whole panel, both before and after the GFC (see Figure 1, upper graphs). This does not mean that the role of quality and complexity should be overlooked. Most likely, the result depends on a significant country heterogeneity. Indeed, the exploration by Kohler and Stockhammer involves seven different clusters, namely: English-speaking countries; Nordic countries; the Benelux; German-speaking countries; Southern Europe; CEE countries; and the Baltics. If we remove CEE countries (Czech Republic, Hungary, Poland, Slovakia, Slovenia) and the Baltics (Estonia, Latvia, Lithuania) the correlation between the

[23] Kohler and Stockhammer (2021) criticized the country taxonomy by Hein et al. (2021) inasmuch grounded on the contribution of different components of demand to economic growth. They argued that, by looking at growth contributions, we shall see that almost all European countries oddly turn out to be export-led after the GFC. However, in most of the countries, the improvement in the growth contribution of CAs was largely driven by a reduction in import rather than an increase in export, and therefore those countries are not truly export-driven (cf. Morlin et al., 2022). To consider this point, in our empirics we shall put the emphasis on export growth, uniquely.

ECI and the average growth rate of export increases up to 0.47 in the pre-crisis period, while it is nearly zero after the GFC (see Figure 1, lower graphs).

By putting in connection the evolution of price competitiveness and that of export *before* the GFC, we still find some thought-provoking results if we exclude CEE and Baltics countries. The eight countries belonging to these groups exhibit the highest export growth in the panel: in these economies, export growth was impressive; at an average pace of more than 10% each year from 2000 to 2007 (the lowest growth rate was in Estonia, where the pace of export settled at about 9% yearly). This outstanding performance is probably due to their increasing process of integration into European markets (see Crespo and Fontoura, 2007), as well as to lower levels of costs and wages. In other words, the statistically insignificant association between the change in the REER and the growth rate of export (2000–2007) detected for the panel as a whole (see Figure 2, upper graphs) is almost completely driven by these two regions, while a negative association, as expected, holds for the rest of the sample (see Figure 2, lower graphs).[24]

This preliminary evidence suggests something different from Kohler and Stockhammer's one: competitiveness differentials had been significant in shaping export flows, at least before the GFC, as testified by the inverse relationship with the REER and the positive relationship with export sophistication. The considerations made so far visibly indicate that some further effort will be necessary to overcome the gaps of the existing contributions aiming at quantifying the role of price (and non-price) competitiveness in shaping export and export-led growth strategies. We shall try to deal with this point in the next section by means of a quantitative exploration.

6. Empirical exploration

To better assess the importance of price and non-price factors for OECD countries, it can be appropriate to use more sophisticated econometric techniques, rather than simple correlations. This point is particularly important as methods capable of detecting structural, long-run relationships between export and competitiveness and that control for country-specific effects should be preferred to descriptive techniques that might yield misleading results due to country-specific issues and produce spurious effects because of the omitted variable bias: in particular, price and non-price factors have to be jointly considered together with a measure of external demand, as pointed out by Hein et al. (2021) in commenting on the seminal work by Baccaro and Pontusson (2016).In this section, we propose an econometric exploration that tries to overcome the aforementioned methodological problems. Specifically, we apply export equation-based modeling to the panel of countries introduced in the previous section for the period 1994- 2019.[25] An export equation seeks to explain the variability of export by simultaneously considering the impacts of foreign demand and that of different sources of competitiveness (see European Commission, 2010; Bayoumi et al., 2011; Baccaro and Tober, 2017; Paternesi Meloni, 2018; Keil, 2022). In our exploration, a main element of novelty is to express the latter in both the two versions considered in this paper, namely price competitiveness and non-price competitiveness. To detect long-run, structural effects, the empirical strategy we follow is grounded on a cointegration method for panel data and relies on panel-ARDL (autoregressive distributed lags). Formally, the econometric model we estimate can be represented as in Equation (1) below.

[24] Remarkably, a similar result comes from a work promoted by the European Commission (D'Adamo, 2017). Specifically, a positive correlation emerges between the average annual change in REER and the average annual change in export market shares when considering the Euro area (from 2001 to 2014). Nonetheless, when removing Latvia, Estonia, Lithuania and Slovakia, the relation becomes negative.

[25] The starting year of the timespan is dictated by data availability on the REER; while it ends in 2019 to leave aside the Covid-induced crisis. Notably, our econometrics refer to 28 countries (instead of the set of 30 considered in Section 5) as all specifications include the ECI (not available for Iceland and Luxembourg).

$$\Delta EXP_{i,t} = \alpha_i + \beta_i \Delta EXP_{i,t-1} + \gamma_i \Delta FD_{i,t} + \delta_i \Delta REER_{i,t} + \theta_i \Delta ECI_{i,t} + \varphi_i CE_{i,t} + \varepsilon_{i,t}$$

with

$$CE_{i,t} = EXP_{i,t-1} - \mu_i FD_{i,t} - \eta_i REER_{i,t} - \delta_i ECI_{i,t} \quad (2)$$

where EXP is the log of export (expressed in volume) of country i in year t; FD is the log of the foreign demand (in real terms) faced by country i, calculated as the income of the OECD aggregate net of the income of country i; $REER$ is the real effective exchange rate (an increase meaning a real appreciation), the most common indicator of price competitiveness, calculated by using the ULC as a deflator and with respect to two alternative groups of partner countries, namely the European countries ($REER\_27$) and a broader group of industrialized countries ($REER\_37$), according to Eurostat definition; ECI is the index of economic complexity (already discussed in Section 5), as a measure of non-price competitiveness; ε denotes the error term.[26] Equation (2) reports the cointegrating equation (CE), capable of representing the long-run equilibrium condition. The cointegrating equation embodies the most relevant coefficients for our purposes, as μ, η and δ represent the long-run elasticities (since variables are expressed in logarithmic terms) to foreign demand, price and non-price competitiveness, respectively.[27] Notably, the long-run relationship would be meaningful only in the case of statistical significance of the coefficient associated with the cointegrating equation (φ), a significance that would also assure the direction of causality (from foreign demand and competitiveness to export). Analogously, γ, δ and θ represent the short-run elasticities to foreign demand, price and non-price competitiveness, respectively. The spirit of our technical scheme is to capture a long-run relationship (the focus of this work) between variables taken in levels – that is, the cointegrating equation expressed in parenthesis in Equation (1) – as well as short-run effects, represented by the coefficients of the regressors taken in growth rates.[28]

Before the estimations, we verified that our variables (taken in levels) are not stationary in a panel environment by employing an Im–Pesaran–Shin test (2003).[29] After having verified that variables are I(1) at the panel level (see Table B1 in Appendix B), we check for cointegration through a Westerlund-type test (Persyn and Westerlund, 2008) for panel data. As can be seen in Table B2 in the Appendix, this test does not indicate cointegration at the panel level. This is not surprising for two reasons: first, as a relatively high number of covariates is involved in our setting; and second, as cointegration might hold only for some panels but not for all simultaneously.[30] This is why we do not employ estimators that require strong cointegration (as PDOLS or FMOLS), while we leverage the approach proposed by Pesaran et al. (1999), which is more flexible and can be implemented even in case regressors are stationary. Indeed, we shall present results based on three alternative estimators. First, we use a standard dynamic fixed-effects (DFE) estimator that assumes homogeneity in every dimension except in the constant term (and thus considers country heterogeneity only in α_i). Second, a pooled mean group (PMG) estimator (Pesaran et al., 1999) that relies on a combination of pooling and averaging of coefficients: specifically, the PMG imposes homogeneity restrictions on long-run coefficients (that is, on the coefficients within the cointegrating equation) across countries while maintaining heterogeneity for short-run dynamics and the constant term. Third, a mean

[26] In Appendix A we report data and sources in more detail.

[27] More precisely, the coefficient associated to $REER$ and ECI should be seen as semi-elasticities since those variables are indices and therefore not expressed in logarithmic terms.

[28] We also control for the lagged growth in export to take into account possible (short-run) autocorrelation effects, captured by the coefficient β in Equation (1).

[29] In our framework, this procedure is preferable to alternative tests (Levin–Lin–Chiu test or Harris–Tzavalis) since it does not require a strongly balanced dataset.

[30] This second point has been stressed by employing a Johansen-type cointegration test for time series. Results are reported in Table B3 in the Appendix and confirm the likely existence of cointegration among EXP, FD, $REER$ and ECI for 14 (out of 28) countries.

group (MG) estimator that estimates different time-series regressions and then averages the coefficients (both in the short and the long run), so that it allows for heterogeneity in every dimension (cf. Blackburne and Franck, 2007).[31]

Results are presented in Table 1, which reports the estimated coefficients for both the short and the long run, with the latter referring to the relationship between variables taken in levels, as indicated in Equation (2). Notably, we shall present our results separately for the $REER\_27$ and the $REER\_37$ as representative of cost competitiveness: in so doing, we will be able to capture differences in (relative) price competitiveness ascribable to the group of the considered trading partners.[32]

Table 1. Panel ARDL regression

	$REER\_27$			$REER\_37$		
	PMG	MG	DFE	PMG	MG	DFE
Long run						
FD	1.808***	2.108***	2.058***	0.590***	1.856***	1.919***
	(0.056)	(0.203)	(0.201)	(0.070)	(0.271)	(0.213)
$REER$	-1.266***	-0.709*	-0.722***	-0.268***	-0.910	-0.193
	(0.140)	(0.518)	(0.272)	(0.059)	(0.793)	(0.234)
ECI	0.277***	0.032	0.740***	0.062	0.242	0.622***
	(0.091)	(0.267)	(0.156)	(0.106)	(0.340)	(0.174)
CE	-0.106***	-0.387***	-0.078***	-0.051***	-0.376***	-0.076***
	(0.018)	(0.051)	(0.014)	(0.019)	(0.056)	(0.015)
Short run						
ΔEXP_{-1}	0.033	0.055*	0.054*	0.024	0.064**	0.062**
	(0.032)	(0.028)	(0.028)	(0.029)	(0.029)	(0.028)
ΔFD	2.544***	1.898***	2.666***	2.613***	1.780***	2.646***
	(0.215)	(0.269)	(0.132)	(0.221)	(0.278)	(0.133)
$\Delta REER$	-0.052	-0.001	-0.055*	-0.163***	-0.122**	-0.082**
	(0.075)	(0.105)	(0.036)	(0.058)	(0.058)	(0.032)
ΔECI	0.117***	0.076**	0.123*	0.123***	0.061*	0.114***
	(0.044)	(0.038)	(0.033)	(0.043)	(0.039)	(0.033)
Constant	-1.962***	-10.158***	-1.930***	0.086**	-9.413***	-1.723***
	(0.327)	(2.411)	(0.536)	(0.041)	(2.148)	(0.538)
Countries	28	28	28	28	28	28
Obs.	664	664	664	664	664	664

*Dependent variable: ΔEXP. Note: FD is the (unweighted) income of trading partners, as a proxy for foreign demand; $REER$ is the real effective exchange rate based on unit labour cost, as a proxy for price or cost competitiveness; ECI is the index of economic complexity, as a proxy for non-price competitiveness. Timespan: 1994-2019. Robust standard errors (clustered by countries) in parentheses; *, **, and *** denote levels 0.1, 0.05, and 0.01 of significance.*

According to our results, the long-term, negative relationship between EXP and $REER$ (that is, the negative effect of a higher real exchange rate on export) is statistically significant in all estimations independently of

[31] Putting it differently, the PMG imposes homogeneity restrictions on long-run coefficients across countries while maintaining heterogeneity for short-run dynamics. On the contrary, the MG does not require a restriction, and hence it allows all coefficients to vary as well as to be heterogeneous in the short and long run; nevertheless, the MG does not account for cross-country dependence that can arise from spatial or spillover effects or could be due to unobserved common factors (Baltagi and Pesaran, 2007).

[32] It is worth noting that the two measures of price competitiveness do not perfectly correlate each other at the panel level, being the Pairwise correlation equal to 0.58. This testifies to differences in relative price competitiveness depending on the group of countries with respect to which each economy measures its capacity to compete on price.

the group of partners considered by the index of price competitiveness, confirming the role played by price/cost factors in driving export. The most statistically significant coefficients are those for the $REER\_27$, ranging from −0.7 (MG and DFE) and −1.2 (PMG). Putting it simply, this means that a higher level of the REER of one base point is associated with a lower level of export of approximately 1 percentage point (on average across specifications). Notably, the strong significance of the $REER\_27$ confirms the importance of price competition within the European Union. At the same time, a positive relation between EXP and ECI (that is, the positive effect of higher non-price competitiveness on export) holds in all models, with coefficients ranging from 0.2 to 0.7 when significant. Some discrepancies emerge when we move from the analysis based on $REER\_27$ to the one based on $REER\_37$: in the latter, price competitiveness is likely to be less statistically significant than in the former, further confirming the role of cost competition in the European environment. As expected, we find a positive association between foreign demand and export, with an income elasticity of about 2 (the estimated income elasticity is lower when considering PMG estimates, probably as the latter explicitly consider cross-sectional dependence). Finally, the significance of the coefficient estimated for the whole cointegrating equation (statistically significant in all specifications) verifies that a long-run relationship among variables hold, and that causality runs from our drivers of export to export.

Concerning the short-term effects, we find noteworthy evidence: while the role of non-price factors is evident in all estimations (and quite in line with the size of the long-run effects), the role of price competition is slightly different, as it becomes more significant when prices are compared to the broader group of 37 economies (the short-term elasticities for $REER\_37$ is significant, while it is not for $REER\_27$). Lastly, we estimate a short-term elasticity to foreign demand slightly higher than the one estimated for the long run (about 2.5, on average).

All in all, our results indicate that also price competitiveness, proxied by the ULC-REER, plays a role in determining the evolution of export in high-income economies. Of course, a potential limitation of the methodological matter remains: although the technicalities nested in our approach allow us to mitigate cross-country heterogeneity, the latter might, at least partially, bias the estimations when dealing with economies with large discrepancies in terms of export performance and institutional settings. To overcome this issue, a long-term, country-specific estimation of the export elasticity to both price and non-price factors will contribute to providing further evidence on this topic.[33] The existence of significant price elasticity, however, does not imply that OECD countries export predominantly low-quality items, for which competition is traditionally based on costs. Nonetheless, the price can be a factor of competitiveness also for more sophisticated goods, particularly in a context of highly internationally fragmented production in which the manufacturing or assembling phases can be relocated to countries with cheaper labor costs, while keeping the final stages at home.[34]

Combined with some research that has already documented significant price sensitivity, our findings contrast the view that export in mature countries is almost exclusively driven by quality and diversification (that is, by non-price elements), as a significant price and cost elasticity structurally holds. While cost and price competitiveness can of course be fostered through innovation and R&D effort capable of stimulating productivity (and therefore compress the ULC), that has important implications for a political economy-based

[33] To the best of our knowledge, some country-specific explorations encompassing some of these analytical and procedural characteristics exist: for Italy, Paternesi Meloni (2018); for Greece, Athanasoglou and Bardaka (2010); for four big European countries, Giordano and Zollino (2016); for the Euro area as a whole, Monteagudo (2010) and D'Adamo (2017), even if grounded on short-run relationships. However, these works are quite outdated with respect to the current debate and, more importantly, not directly comparable to each other due to methodological discrepancies. Of course, the analysis could be also extended to further dimensions of non-price competitiveness (reviewed in Section 3).

[34] Marin (2010) underlined the cases of Austria and Germany, which benefited from the integration of CEE countries in the European markets (through the progressive elimination barriers to trade and investment): according to the author, outsourcing in Eastern Europe allowed to drastically reduce ULC growth.

investigation, since export-led strategies grounded on wage (or welfare) reductions seem to be effective in fostering export.

7. Concluding remarks

In this article, we focused on a specific aspect of the debate on differentiated models of capitalism within the CPE/IPE literature. Particularly, we elaborated on the twofold nature of competitiveness, which can be alternatively observed from a price and a non-price standpoint. The sensitivity of export to price changes is a central element of the growth model perspective, as significant price elasticities indicate that policies of internal demand suffocation would effectively promote the growth of export, even at the cost of further altering the distribution of income. We reviewed and discussed several works devoted to this specific debate, from which no consensus seems to arise on the determinants of export. Probably, as mixed evidence emerges when using unsophisticated empirical techniques, acutely if they do not allow to control for the role of non-price factors and external demand, this depends on procedural and methodological factors.

In spite of the somehow disappointing state of the art, the topic is particularly appealing since, if cost competitiveness proved to be relevant in shaping export, neo-mercantilist strategies, despite their detrimental social impacts, would be economically useful.[35] On the other hand, if the role of price competitiveness turned out not to be significant, other dimensions of competitiveness (such as diversification and quality) would prove to be more and more relevant in promoting export: in other words, as long as exports are less price-sensitive, export-led strategies could in principle coexist with more stable patterns for internal demand and labor remunerations.

Our panel-based empirical exploration suggests that (also) price competitiveness matters in influencing export in mature economies. This finding is partially in contrast with some of the existing empirical research, which documents an almost nil role for cost factors in affecting export in OECD countries, that is a price-inelasticity of export. This avenue of inquiry, to which our contribution is intended to pave the way, would undoubtedly benefit from country-specific estimations of price elasticities. This would help identify distinctive national export profiles, to be meant as a first step in the examination of how national practices and institutions – particularly in the labor market – may have contributed to export performances and patterns of international specialization. In this respect, a related issue to be investigated in future research would be assessing whether Scandinavian and Continental Europe economies are effectively more oriented toward intercepting high-quality markets and niches (in both manufacturing and services), while Mediterranean economies tend to focus their productive efforts on more price elastic items, as it seems to emerge from the recent literature on European countries.

A final question looms over several of the issues we discussed in this article: how to get out of the never-ending phase of stagnation in the Euro area? There is no easy answer to this question. *Prima facie*, our empirical findings would seem to imply that those countries that – particularly in the European environment – are adopting neo-mercantilist policies, have a point. Being exports effectively price-sensitive, wage deflation and the repression of internal demand give a boost to exports and, hence, potentially to growth. Especially in a context where nominal devaluations are ruled out, as it is in the Euro area, these are the most immediate ways to enhance a country's price competitiveness. These unsettling conclusions are not, however, inescapable. As it has been recalled at the beginning of this work, the emergence of the export-led growth model – with its twin brother, the debt-led one (cf. Stockhammer, 2015) – answered the demand-generating problems created in most advanced economies by years of wage share decreases and a steady retreat of the State from its traditional demand management role. Drastically inverting these two tendencies

[35] A caveat here should be taken in mind: if export-led strategies led to huge external surplus, such strategies would be not equitable towards deficit countries. Moreover, that would be not sustainable in the long run as deficit countries cannot present a 'permanent' external deficit (see Giavazzi and Spaventa, 2010; and Cesaratto, 2015, for an alternative view). The United States represent a remarkable exception, mainly due to the international predominancy of the US dollar as a reserve currency.

would contribute to solving the problem upstream and to eliminate, or at least strongly narrow, the need for export-led strategies in advanced economies, with their "dog-chasing-its-tail" nature. As long as this shot might sound, the alternative is neither more realistic nor more pragmatic. The combination of export-led and debt-led economies is not only socially undesirable, but it is also inherently unstable and unsustainable in the long-run, inasmuch it requires the existence of countries with persistent trade deficits, and it is often accompanied by the accumulation of growing stocks of private debt. The sooner this is acknowledged, the better the prospects for a European recovery.

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Appendix A. Data and sources

Variable	*Caption*	*Description*	*Source*
Export	EXP	Export of goods and services (constant prices, constant exchange rate, OECD base year).	OECD.STATS (dataset: Annual National accounts, Main aggregates).
Foreign demand	FD	Foreign demand is proxied by the GDP (constant prices, constant exchange rate, OECD base year) of the OECD aggregate minus the GDP of the exporter country.	Own calculation on OECD.STATS (dataset: Annual National accounts, Main aggregates).
Price competitiveness	$REER\_27$	Trade-weighted nominal exchange rate based on basket of currencies; deflated by relative unit labour cost; index (2015=100). Partners: EU27.	European Commission, Price and Cost Competitiveness, Data Section.
	$REER\_37$	Trade-weighted nominal exchange rate based on basket of currencies; deflated by relative unit labour cost; index (2015=100). Partners: IC37.	European Commission, Price and Cost Competitiveness, Data Section.
Non-price competitiveness	ECI	Index of economic complexity, based on trade in products from UN Comtrade SITC2 (version HS92, 4 digits); index.	Observatory of Economic Complexity (OEC).

Appendix B. Pre-estimation tests

Table B1. Stationarity test

Variables in levels			Variables in first differences		
Variable	Z-t-tilde-bar	p-value	Variable	Z-t-tilde-bar	p-value
EXP	-0.5203	0.3014	ΔEXP	-13.5547	0.0000
FD	3.3981	0.9997	ΔFD	-12.6068	0.0000
$REER\_27$	-1.0623	0.1440	$\Delta REER\_27$	-12.1186	0.0000
$REER\_37$	-1.2533	0.1051	$\Delta REER\_37$	-12.3645	0.0000
ECI	-0.7885	0.2152	ΔECI	-13.0205	0.0000

Im-Pesaran-Shin unit-root test for different variables. Null hypothesis: All panels contain unit roots. AR parameter: panel-specific. Panel means: included. Time trend: not included. Number of panels (across variables): 28. Average number of periods (across variables): 24.86.

Table B2. Westerlund cointegration test at the panel level

Variables: $EXP;\ FD;\ REER\_27;\ ECI$

Statistics	Value	Z-value
Gt	-1.440	1.392
Ga	-1.898	5.009
Pt	-6.795	0.132
Pa	-1.926	1.964

Variables: $EXP;\ FD;\ REER\_37;\ ECI$

Statistics	Value	Z-value
Gt	-1.169	2.792
Ga	-2.104	4.835
Pt	-5.392	1.203
Pa	-1.554	2.276

Note: the null hypothesis is no cointegration. Each test includes 28 series and 3 covariates.

Table B3. Johansen cointegration test at the country level

Country	*Trace statistics (REER_27)*	*Trace statistics (REER_37)*	*Country*	*Trace statistics (REER_27)*	*Trace statistics (REER_37)*
Australia	43.9606	39.8827	Latvia	47.0110	17.8108*
Austria	28.1403*	23.3333*	Lithuania	24.2228*	46.2446
Belgium	21.8469*	23.3567*	Netherlands	46.9416	41.6377
Canada	20.4035*	18.7789*	New Zealand	42.0852	36.0109
Czech Rep.	29.8771	30.4032	Norway	22.9232*	20.7521*
Denmark	18.9489*	19.0370*	Poland	40.1393	43.4123
Estonia	15.4991*	15.2046*	Portugal	11.6541**	23.6157*
Finland	44.3223	25.8442*	Slovakia	33.8290	35.1221
France	34.9650	38.3512	Slovenia	28.3471*	6.1750**
Germany	27.4070*	41.3969*	Spain	6.6240**	24.8819*
Greece	37.6754	36.9456	Sweden	22.4905*	40.2822
Hungary	37.1556	37.8816	Switzerland	45.4577	38.8108
Ireland	46.9154	23.6928*	United Kingdom	42.0075	42.4956
Italy	23.7772*	43.0883	United States	12.3638**	8.1309**

Variables: $EXP;\ FD;\ REER;\ ECI$. *Trend: constant. Lags: 1. * denotes cointegration (rank 1) at the 95% level (critical value: 29.68). ** denotes cointegration (rank 2) at the 95% level (critical value: 15.41).*

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