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The price vs. non-price competitiveness conundrum: a post-Keynesian comparative political economy analysis

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Abstract

Recently, several post-Keynesian scholars have entered the debate on comparative political economy. Within this approach, the research on different demand-led growth strategies converges on the idea that differentiated models of capitalism are finding the engines of growth in debt-financed domestic demand or foreign demand, alternatively. Nonetheless, some layers of disagreement emerge when investigating the reasons for a country's export success, particularly concerning the European core-periphery dualism. On the one side, some studies emphasise the role of price and cost competitiveness. On the other side, other scholars ascribe the huge performance of export-oriented countries to non-price factors (e.g., product quality and diversification). The purpose of this paper is to deepen this specific debate from a post-Keynesian political economy perspective. Besides overviewing the existing literature, we extend Kohler and Stockhammer's (2021) work on price and non-price competitiveness as growth drivers to export dynamics. Our evidence indicates that both price and non-price competitiveness differentials had been significant in shaping export flows before the outbreak of the great financial crisis of 2007-08. We also observe that methodological issues and large heterogeneity across countries belonging to different models may alter the overall picture on the relative relevance of price and non-price factors. Therefore, we conclude that country-specific analyses based on the estimation of well-specified export equations, explicitly encompassing non-price competitiveness, are necessary to assess the sensitivity of export to price and cost factors.

Keywords post-Keynesian economics; comparative political economy; export; price competitiveness; non-price competitiveness.

JEL classification E02; P16; P51; O57

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What elaborated in this piece benefited from fruitful discussion with Lucio Baccaro, Eckhard Hein, Riccardo Pariboni and Antonella Stirati. It goes without saying that the usual disclaimer applies.

1. Background and rationale

The pandemic-induced economic collapse runs the risk of overshadowing the long-lasting phase of stagnation of the European economy. Before the outbreak of the Covid-19 emergency, several countries, and in particular Mediterranean ones, did not recover the pre-2008 activity levels. Focusing uniquely on the recent collapse could wrongly lead us to treat a decade of stagnation as a 'new normal'. Interestingly, that slowdown has fostered the discussion on the strategies pursued by different countries to achieve satisfactory (and sustainable) growth rates. At the same time, economists and political economy researchers wonder about the possible causes of the sluggish economic growth, with a view to detecting which strategies and policies – or perhaps the inaction – may have prevented countries to recover after the great financial crisis of 2007-09 (henceforth, GFC). While the conventional explanation of the European conundrum focuses predominantly on the supply-side and ties stagnation to the slowdown in productivity, we are witnessing a fascinating change in perspective from several non-mainstream authors who entered the comparative political economy (henceforth, CPE) field of investigation. Indeed, some contributions started to systematically analyse the demand side of the economy and, even more importantly, provided an interpretative framework to compare and contrast capitalist economies. That strand of literature goes well beyond the standard approach to economic facts based on economics and economic policy, paying attention also to other socio-economic aspects.[1] In examining the current features and the evolution of contemporary capitalisms, unorthodox CPE indicates that economic systems should not be examined through the lens of the economic theory uniquely, while 'economic, social, and political factors have to be analysed in conjunction' (Stockhammer, 2021, p. 2).

One of the more interesting intuitions of this novel strand of literature 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. This dare favoured the birth of the 'growth model' perspective, baptized by the seminal work of Baccaro and Pontusson (2016). According to this approach, (demand-led) growth regimes can be generally distinguished into two broad groups. On the one side, countries where debt-financed 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 household consumption or government expenditure.[2] On the other side, countries that relied on external demand as the locomotive of growth and that promoted export in different ways, such as containing wage inflation and incentivising 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.

This method of inquiry represents an evolution of the traditional approaches, which do not consider aggregate demand and its components at the core of the analysis and ground on the structural, supply-side characteristics of each economy (Hall and Soskice, 2001). Following this innovative scheme of investigation, many attempts have

[1] Among these, we can mention the institutional framework, power relations, the potential effectiveness of government interventions, the process of financialization and globalization of the economy, the interactions among social blocs, with important implications for electoral outcomes. On this last point, which goes well beyond the scope of this article, the reader may refer to 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 in case Central banks unconditionally support full-employment policies put in place by governments. The second strategy, however, has been predominantly followed by countries that are not subject to fiscal policy constraints (cf. Hein et al., 2020).

been made to nudge CPE towards 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, Behringer and Van Treeck, 2017; Hein et al., 2020; Kohler and Stockhammer, 2021; Baccaro and Tober, 2021).

A consensus on what elaborated so far seems to embrace also the rich, broadly defined post-Keynesian (henceforth, PK) community. Nevertheless, beneath the apparent harmony, some layers of controversy emerge when investigating the reasons for the success of foreign trade in 'export-led' countries. The main element of the debate is the identification of the leading driver of export: on the one hand, some studies indicate that price and cost competitiveness, measured through the real effective exchange rate and/or (relative) unit labour costs, is the key factor behind export growth; on the other hand, other contributions mainly ascribe the huge external performance of export-oriented countries (first and foremost, Germany) to non-price factors, such as product quality, diversification and the composition of export. The present paper wishes to contribute to this specific debate. To do that, we start from the recent evidence stemming from some works belonging to the PK tradition on the role of price and non-price competitiveness. Nevertheless, this piece does not presume to reply to the complex answer 'which is the relative importance of price and non-price factors for each economy', as we will conclude that this would need for an econometric, country-specific estimate of exports' price and non-price sensitivity. Less ambitiously, here we aim at shedding light on the recent findings and, hopefully, at suggesting some empirical research avenues in the CPE field.

The rest of the paper goes as follows. In Section 2, we discuss the role of export in the PK-CPE literature. In Section 3, we introduce the concepts of price and non-price competitiveness and how they are supposed to relate to different models of capitalism. In Section 4, we examine the recent PK-CPE contributions on the relevance of price and non-price factors. In Section 5, we concentrate on the findings by Kohler and Stockhammer (2021) and propose an empirical test aimed at extending their approach to export growth. Section 6 concludes and draws some lines for future developments of empirical research aimed at assessing the respective relevance of price and non-price competitiveness in shaping export and export-led strategies.

2. Why export is central in the growth model perspective?

At least in principle, the answer to this question can be confined to a simple statement: given that exports can be a crucial source of demand, the (demand-led) growth model perspective cannot put aside the international environment. But in our view, to completely understand why export and its drivers deserve attention in the PK literature on CPE, it is necessary to start from what characterized the European economy after the GFC. 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 co-existence of differentiated models of capitalism under the same umbrella, as it is rather clear in

[3] In some cases, this conundrum resulted in scepticisms on the whole project of European integration. For a discussion, see Cohen (2012).

the words of Gambarotto and Solari (2015) who describe Europe 'as a set of asymmetrically integrated variety of capitalism' (p. 788).

Concerning the topics of this work, that is export and competitiveness, the story can be – quite intuitively – articulated as follows. In terms of wage-setting institutions and growth regimes, two types of countries joined the economic and monetary union: on the one hand, highly competitive export-led economies with coordinated bargaining systems capable of producing wage restraints, mainly represented by Continental and Northern European (or Scandinavian) countries; on the other hand, domestic demand-driven economies fostered by bank credit or the housing sector, such as Mediterranean countries characterized by uncoordinated wage bargaining schemes and a structurally higher pace of inflation. In addition to wage and price dynamics, the VoC approach indicates that the institutional configuration of the Continental European countries is more equipped (than the one of the Southern European countries) to foster innovation and promote product quality; therefore, the export-led economies of the European 'core' may have benefited not only from the currency peg (that is, they may have gained price competitiveness due to an undervalued exchange rate), but also from relatively higher non-price competitiveness. For instance, about Germany, which is a textbook case within this literature, Storm and Naastepad (2015) claimed that the German institutional setting matters because it strengthens non-price competitiveness (rather than producing wage moderation).

Yet, both models, even if taken alone, present some element of risks: 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). But in addition to the specific risk of each model, the root cause of the macroeconomic imbalances within the Eurozone has to be found in the aforementioned North-South asymmetry, which translated in a strong dualism between export-led and (debt-financed) consumption-led economies (Iversen et al., 2016; Hall, 2018; Baccaro and Tober, 2021). For this reason, the elaboration on different institutional settings, as well as on the alternative determinants of growth, has become central in CPE studies focused on Europe.

Until a few years ago, the study of differentiated models of capitalism has generally been grounded on mainstream pillars, concerned with the microeconomic and structural supply-side features of the economy, as well as on the standard New Keynesian 3-equations model. The fundamental outcome of this approach is the dichotomy of coordinated market economies (CME) and liberal market economies (LME), which also encompasses the existence of mixed market economies (MMEs) (Hall, 2015; Hall and Gingerich, 2009). That is the archetypal distinction identified by Varieties of Capitalism (VoC) approach (Hall and Soskice, 2001). Recently, significant efforts have been made at connecting CPE approaches, as the VoC theory, with non-mainstream macroeconomic research, and particularly with PK-inspired works (Stockhammer, 2021), on different demand and growth regimes in modern capitalism. The spectrum is very large (see among others Baccaro and Pontusson, 2016; 2018; Martin, 2016; Piore, 2016; Streeck, 2016; Behringer and Van Treeck, 2017; Stockhammer, 2018; Stockhammer and Ali, 2018; Hein et al., 2020; Baccaro and Tober, 2021; Kohler and Stockhammer, 2021), but the lowest common denominator of these contributions is to highlight differences and shifts of demand-led (and therefore growth) regimes across advanced economies, and particularly European countries.

The contribution that kicked off the debate was the one by Baccaro and Pontusson (2016). The main innovation of this work is 'to return to Keynesian and Kaleckian insights neglected by CPE scholars' (p. 2), as it emphasises the demand side of the economy and places the distribution of income, among households and between labour and capital, at the centre of the analysis. Specifically, the two authors use the PK distinction between profit-led and wage-led demand regimes, on the one hand, and between consumption-driven and export-driven regimes, on the other, to question the relevance of the dual VoC distinction between CMEs and LMEs for the period before the GFC. A similar attempt has been made by Behringer and Van Treeck (2017), who made use of the VoC approach to explain the different dynamics of macro-variables (consumption and net exports), which have generated debt-led consumption-driven or export-driven regimes before the GFC. In a similar vein, Hein et al. (2020) developed a taxonomy of (demand-led) growth models by distinguishing four regimes before and after the GFC, namely the export-led mercantilist, the weakly export-led, the domestic demand-led and the debt-let private demand boom.[4]

Despite some methodological differences, all the above-mentioned contributions endorse a demand-side perspective and emphasise the role of export as a component of aggregate demand in shaping the growth model of a country.[5] With a certain degree of generality, according to the PK-CPE approach a country is considered to be export-oriented in case export turns out to be the most important driver of GDP growth. Nevertheless, the debate on the determinants of export performances of export-led countries is quite lively within this strand of literature, and the question to be answered is the following: why these countries are so capable of capturing foreign demand? And, more importantly, are the key drivers of exports the same among export-led countries?

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 demand. While acknowledging that export would not exist without demand from abroad, it is quite natural to wonder why a country exports more than another. That question is central because alternative answers would shape different strategies to foster export. Not surprisingly, competitiveness has been already studied within the VoC approach, where the institutional conditions rendering domestic firms internationally competitive have been analysed, and where differences in competitiveness have been highlighted as drivers of external imbalances (see among others Johnston et al., 2014; Hall, 2014; Iversen et al., 2016). But what is interesting to explore from a political economy standpoint, and in particular for what concerns the PK-CPE literature, is the distinction between price competitiveness and non-price competitiveness. A further point to be discussed is what lies behind these alternative drivers of export in terms of institutional settings and the patterns of the distribution of income.

On the one side, price competitiveness is usually captured by the dynamics of the real effective exchange rate (REER) or unit labour cost (ULC). The former 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

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

[5] Hein et al. (2020, section 2) offer a discussion on such methodological discrepancies (for instance, some contributions focus on export growth, while others on the dynamics of net exports).

partners. The latter compares a country's wages and productivity, and consequently it is generally viewed as a measure of cost competitiveness inasmuch it indicates the average cost of labour per unit of output produced. Importantly, price and cost factors are supposed to be relevant in shaping export in case the price elasticity of export is high. This latter is an essential element 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 case export was 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 will not be affected (very much) by a loss of price competitiveness. Putting it differently, significant price sensitivity of export would indicate an inverse relationship between consumption and export. Notably, 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 foster export). Before reviewing the existing works, an element of evidence has to be pointed out: as it is widely recognised, after the inception of the Euro countries like Germany managed to keep wage inflation under control – according to Brancaccio (2011), thanks to the coordinated wage-setting institutions – while MMEs, like Spain, experienced a loss of competitiveness due to comparatively high inflation, associated to higher domestic demand and housing/financial bubbles in the pre-crisis period (Cesaratto and Stirati, 2010; Paternesi Meloni, 2017).

On the other side, non-price competitiveness represents a more nuanced feature of export, as it captures the quality and sophistication of exported goods and consequently it is quite complicated to translate into a single metric.[6] The main reason why non-price factors should not be disregarded is that export cannot be accounted for just by means of foreign income, prices and costs (Xifrè, 2021). Essentially, non-price competitiveness should, at least in principle, be able to stimulate export *independently* of prices: in other words, countries that mainly 'compete on quality' would experience significant export performances even in presence of relatively high prices, as their goods are sophisticated enough to be sold in the international outlets. By examining the current literature, we can mention some indicators used to represent non-price factors.[7] Probably the most widespread metric is the Economic Complexity Index (henceforth, ECI), built in the spirit of the Hidalgo and Hausmann's (2009) seminal work. According to the ECI approach, a country that has a diversified export basket and that exports items that few other countries can produce will get a high ECI score, and therefore higher sophistication and non-price competitiveness. Other proxies for non-price factors are based on different grounds, namely: i) the effort in R&D and the ensuing diffusion of patents (European Commission, 2010; Monteagudo, 2010; Dieppe et al., 2012); ii) a larger production matrix, which translates into a greater basket of exported goods (Simonazzi et al., 2013); iii) a higher share of hours worked by high-skills workers (Montaruli and Monteagudo, 2009); iv) adjustments of export price indices based on the pioneering works on variety (Feenstra, 1994; Broda and Weinstein, 2006; Benkovskis and Wörz, 2014); v) (relative) total factor productivity, as a proxy for efficiency in the organization of production and, in a broader perspective, the effectiveness of research and innovation (Giordano and Zollino, 2014); vi) the

[6] According to D'Amato (2017), 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.

[7] For a more technical review and discussion, the interested reader may refer to Xifré (2021).

technological sophistication of export, measured through to the share of high-tech export (Lall et al., 2006; Fortunato and Razo, 2014). Despite that variety, all measures share the same message: product competitiveness goes well beyond its price and therefore export cannot be explained through prices and foreign demand, uniquely.

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

Regarding this twofold aspect of competitiveness, the debate is very lively, and, quite unsurprisingly, two main positions emerge. On the one hand, some authors emphasise the role of price competitiveness and wage inflation in altering the export performances of European countries. With particular reference to the PK-CPE family of works, Baccaro and Pontusson (2016) argued that differences among countries have to be found in the different structure and price elasticities of their respective exports: specifically, German exports, mainly consisting of high-quality but standardised 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.[8] On the other hand, other contributions accentuate the role of non-price factors compared to cost competitiveness, stating that the main cause of trade imbalances within the Eurozone has to be found in the fact that, prior to 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, 2016).[9]

In this respect, the recent work by Kohler and Stockhammer (2021) offers an interesting analysis. They estimate the correlation between income growth or the current account, on the one side, and price-competitiveness (REER in the manufacturing, an increase meaning a real appreciation and therefore a loss of price competitiveness) and export sophistication (where a higher score of the ECI represents a 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 depending on the large heterogeneity among countries, their evidence is quite mixed: the only significant association which is consistent with the expectations is the positive correlation between the current account and the non-price competitiveness, both before (1% level) and after (at the 5% level) the GFC (cf. Figure A2 in their paper). Consequently, the take-away message from their work is that non-price factors are more relevant than price factors, also because no significant association holds between REER dynamics and the current account (we shall return on this contribution in Section 5).

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), who vindicate the relevance of price competitiveness for both 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 real effective exchange

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

[9] In this regard, the recent work by Xifré (2021) – framed outside the PK-CPE literature – swims against the tide, arguing that that the conventional North-South divide in the Euro area might not be entirely applicable to non-price competitiveness factors. 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).

rate' (p. 15). To support this view, they present some empirics according to which export growth is negatively associated with a real appreciation for Germany and Italy, whilst Sweden and the United Kingdom do not present any significant effect of the REER on the pace of export. This is not consistent with what advocated by the supporters of non-price competitiveness, according to whom Germany's export success is based on high value-added and superior quality. Similarly, Baccaro and Tober (2017) argued that wage moderation is at the root of the gains in competitiveness of Germany (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).[10] The authors also find an important role of price competitiveness for Italy's export, whose elasticity is estimated at -1.5, in line with Paternesi Meloni (2018) who finds a REER elasticity of export of approximately -1.2.[11] Other non-mainstream works underlined the relevance of price competitiveness in the Eurozone framework, namely Flassbeck and Lapavitsas (2013), Bibow (2013) and Boggio and Barbieri (2017), with the latter arguing that export performance must be explained by levels rather than by changes in unit costs.

Concerning the relevance of non-price factors, the VoC literature indicates that, due to its institutional shapes, a CME is better equipped to foster (incremental) innovation, high-skills and competencies and inter-firm relations, thus promoting product superiority (Hall and Soskice, 2001) and the ensuing competition on high-end items.[12] Empirically, Vermeiren (2017) testifies that high-quality exported goods tend to be almost completely price-inelastic. Similar conclusions have been reached by Storm and Naastepad (2016), according to whom the price elasticities of major Eurozone countries are virtually zero, while net exports are mostly driven by domestic and foreign demand. Other contributions supporting the relevance of non-price factors in the European context are, among others, Danninger and Joutz (2007), Simonazzi et al. (2013) and Carrasco and Peineado (2015).

From our perspective, this debate has not yet reached a consolidated view for methodological reasons. Indeed, the attempts made to empirically estimate the relevance of price and non-price competitiveness through the estimation of export elasticities present some problems and shortcomings which merit discussion right away. In most cases, the empirical investigations presented to measure price elasticity suffer from under-specification. This is, for instance, the case of the contribution by Baccaro and Pontusson (2016) – as already advocated by Hope and Soskice (2016) and Hein et al. (2020) – where the estimation of price elasticities does not control for the dynamics of foreign demand. Moreover, appropriate techniques capable of depicting structural, long-term relationships

[10] This point should be however analysed 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 translated in increasing prices also in the manufacturing, basically for two reasons: on the one hand, some services are inputs of production; on the other hand, they may account for a considerable extent in the consumer basket, therefore influencing monetary wages. See on this Levrero and Stirati (2005) and Paternesi Meloni and Stirati (mimeo).

[11] Many studies on the German case find significant price or cost elasticities – for a survey, see Heinze (2018). Among others, Baccaro and Benassi (2017) estimate negative (and significant) price elasticities for the export of manufactured items, although they refer to short-run coefficients (ranging from -0.4 for ULC-based REER to -0.8 for export prices). According to Neumann (2020), real appreciation negatively affected 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 (2015) 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 makes its export insensitive to changes in prices. A similar debate regards Italy: Breuer and Klose (2015) do not find a significant price effect, contrary to Paternesi Meloni (2018) and Baccaro and Tober (2017) who provide empirical evidence for high price and cost sensitiveness.

[12] The idea behind this reasoning is that CMEs' workers tend to have industry-specific competencies, 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 oriented to short-termism.

through cointegration-based methods should be preferred to short-run correlations (for a discussion, see Paternesi Meloni, 2018). For a limited set of countries, these two aspects are partially addressed in Baccaro and Tober (2017), who estimate long-run export equations. As an additional weakness, it should be noted that in most cases non-price factors are not explicitly 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 the work by Neumann (2020).

5. Some empirical tests starting from the recent work by Kohler and Stockhammer

Within the PK-CPE literature, the only attempt to include non-price factors into the picture has been made by Kohler and Stockhammer (2021). As anticipated, 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 the ubiquity (the total number of countries that export these products). While the intuition is promising and the exercise deserves attention, it is quite surprising that the authors link the indices of competitiveness (both the dynamics of the REER and the scores of the ECI) to aggregate indicators, such as the average growth rate of gross national income (GNI) and/or the current account (CA).[13] As anticipated, they find a positive association between export sophistication and the CA, while no significant correlation holds between export sophistication and income growth. Moreover, they do not find any statistically significant association between the changes of the REER and the growth rate of real GNI, both before and after the GFC (cf. Figure 4 in their paper).[14] Perhaps more importantly, they find a negative (but not significant) relation between REER growth and the CA before the GFC; nevertheless, the relation unexpectedly becomes positive and significant (albeit only at the 10% level) after 2008 (cf. Figure A2 in their paper).

But in our opinion, 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 GNI growth (and not to export dynamics), one may likely find spurious relationships. For instance, in case export would be triggered by increasing cost competitiveness (that is, by a lower unit labour cost, which is almost equivalent to a reduction in the wage share), with this latter associated to a restraint in internal demand, this may result in a domestic/foreign demand trade-off, with no effects on aggregate income growth (as discussed in Section 4). Analogously, linking competitiveness to the CA can be troublesome inasmuch the CA includes also import: being this latter endogenous to income, as Kolher and Stockhammer note with respect to the work by Hein et al. (2020), this may pollute the overall analysis.[15]

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

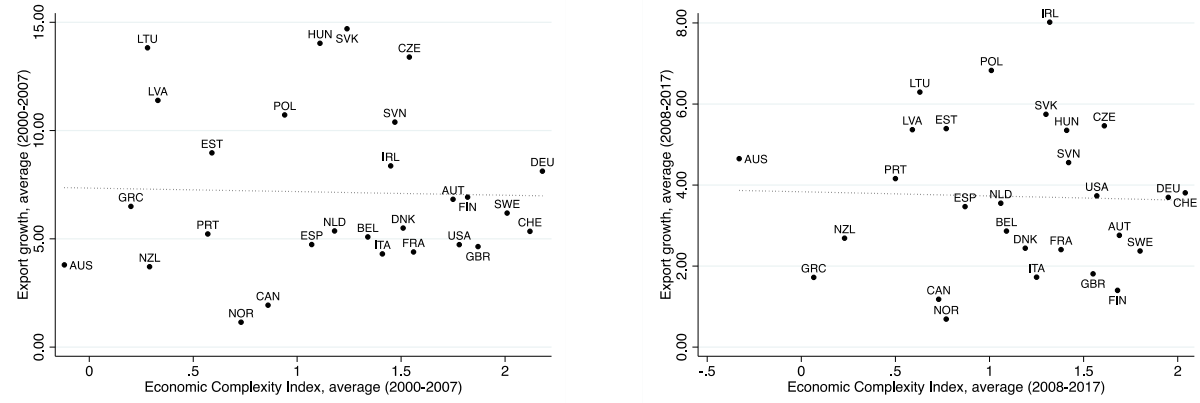
[14] Surprisingly, they find a negative, statistically significant association between ECI and real GNI growth before the GFC (at the 5% level), which however turns out to be insignificant after 2008 (cf. Figure 5 in their paper).

[15] Kolher and Stockhammer (2021) criticize the taxonomy by Hein et al. (2020) inasmuch it is grounded on the *contribution* of different components of demand to GDP growth. The idea is that by looking at growth contributions 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. To take into account this point, in our empirics we shall put the emphasis on export growth, uniquely.

To overcome these potential limits, we propose an extension of Kolher and Stockhammer's empirics by focusing on export exclusively. By applying the same methodology to average export growth instead of the GNI growth or the CA, some eye-catching evidence emerges (see Figure 1). First and foremost, the positive association between export growth and its sophistication virtually disappears for the whole panel, both before and after the GFC (see Figure 1, upper graphs).

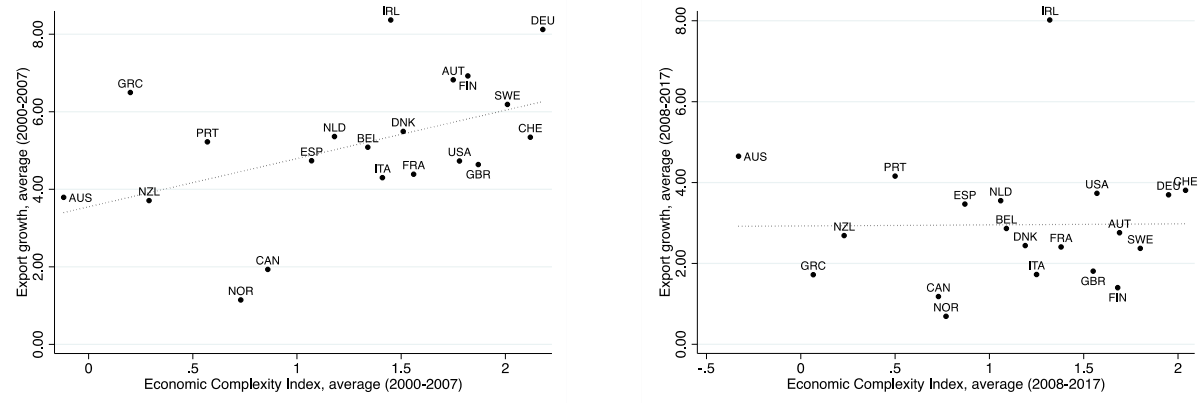
Figure 1. Non-price competitiveness and export performances before and after the GFC

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 = Slovakia; SVN = Slovenia; SWE = Sweden; USA = United States.

This does not mean that the role of quality and complexity should be overlooked. Most likely, such a (non) relationship depends on a significant country heterogeneity. Indeed, the exploration by Kolher and Stockhammer involves seven different clusters, namely: English-speaking countries (Australia, New Zealand, Canada, USA,

Ireland, United Kingdom); Nordic countries (Denmark, Finland, Iceland, Norway, Sweden); the Benelux (Belgium, Netherlands, Luxembourg); German-speaking countries (Austria, Germany, Switzerland); Southern Europe (France, Greece, Italy, Portugal, Spain); CEE, that is Central and Eastern European countries (Czech Republic, Hungary, Poland, Slovakia, Slovenia); and the Baltics (Estonia, Latvia, Lithuania). These countries are characterized by differentiated economic and institutional settings: by considering them as a whole, one could run the risk of including countries and/or models that may alter the overall representation. For instance, if we remove CEE countries and the Baltics, the correlation between the ECI and the growth 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).

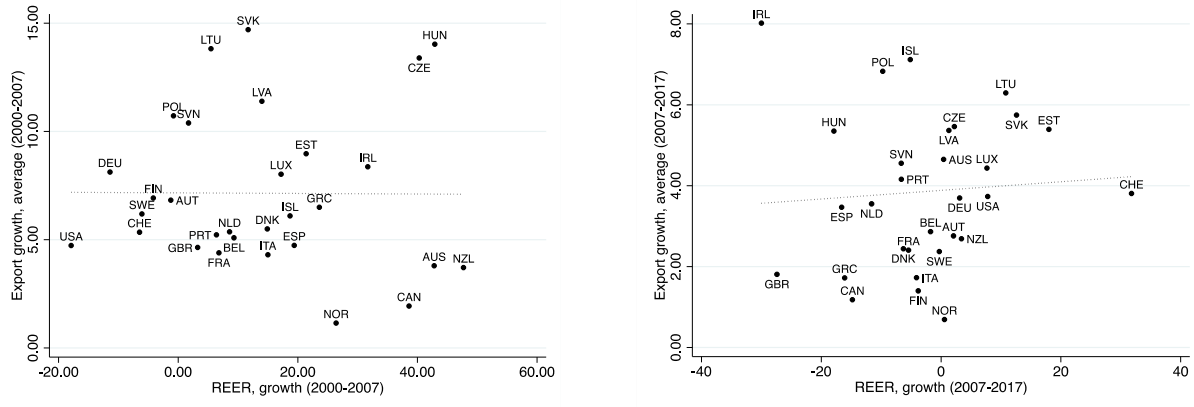
An additional test indicates that such heterogeneity deserves even more consideration. By putting in connection the evolution of price competitiveness and that of export *before* the GFC, we still find some thought-provoking results if we exclude CEE and Baltics countries (see Figure 2). Enquiringly, the eight countries belonging to these groups exhibit the highest export growth in the panel: in these economies, export growth was huge, more than 10% yearly average from 2000 to 2007 (the lowest pace was that of Estonia, where export growth settled at about 9%). This outstanding performance is probably due to an increasing process of integration into European markets (cf. Crespo and Fontoura, 2007), as well as to a level of prices. In other words, the statistically insignificant association between the change in the REER and the growth of export detected for the panel as a whole in the 2000-100t period (see Figure 2, upper graphs) is almost completely driven by these two models, while a negative association, as expected, holds for the rest of the sample (see Figure 2, lower graphs).[16]

This exercise leads us to conclude that the GFC has radically turned the tables for what concerns the role of competitiveness: while before 2008 we see that the expected relationship with export held for both price and non-price factors once some outliers are excluded, no significant relationship seems to exist between competitiveness and export after the GFC. Largely, this would depend on the pattern of foreign demand, which drastically decreased as a result of the financial turmoil and the ensuing real crisis. This is even more so if we consider that Europe is the main export market for Euro area countries (D'Adamo, 2017). Nonetheless, our evidence suggests something different from Kolher 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 one with the sophistication of export. Of course, the strong cross-country heterogeneity may jeopardize this kind of empirical experiments, but 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 influencing export and export-led growth strategies.

[16] 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 (EA19 aggregate, period 2001-2014). Nonetheless, when removing Latvia, Estonia, Lithuania and Slovakia, the relation becomes negative.

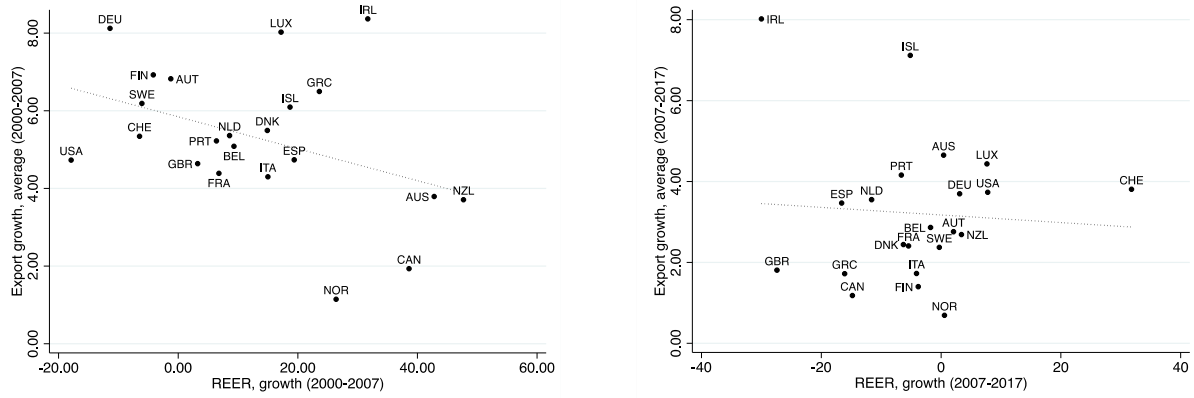
Figure 2. Price competitiveness and export performances before and after the GFC

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.

In our view, three elements should be taken into account to better assess the importance of price and non-price factors. Specifically, the analyses should be carried out: i) at the country level, or at least for an internally consistent model or cluster of countries; ii) focusing on export growth uniquely, and not on income growth or the evolution of the current account; and iii) with appropriate econometric techniques rather than with simple correlations which may lead to spurious results. The latter point is particularly important as methods capable of detecting structural, long-run relationships between export and competitiveness should be preferred, while failure to include non-price competitiveness in the estimations may lead to miss-specification error (see Athanasoglou and Bardaka, 2010). Definitively, this leaves space for future, country-specific studies which can overcome the methodological problems listed above.[17]

[17] To the best of our knowledge, some country-specific studies 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 (2014); 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

6. Concluding remarks and future developments

In this article, we focused on a precise matter of the debate on differentiated models of capitalism within the PK-CPE literature. Specifically, we elaborate on the twofold meaning of competitiveness, which can be alternatively observed and measured from a price and a non-price standpoint. The sensitivity of export to price changes is a central element of the growth model perspective since significant price elasticities would indicate that policies of internal demand suffocation will effectively promote export-led growth, even at the cost of further altering the functional income distribution. Therefore, this field of inquiry would benefit from rigorous, country-specific estimations of price-elasticities.

We reviewed and discussed some works devoted to this specific discussion. Here, no consensus seems to arise on which is the main driver of export. Probably, this depends on procedural and methodological reasons, as documented by our empirical exercise aimed at linking competitiveness to export growth.

Notwithstanding the unsatisfactory current evidence, the topic is particularly appealing since, if cost competitiveness proved to be relevant in shaping export, neo-mercantilist strategies, despite their negative social impacts, would be 'economically useful', as they would actually promote economic growth.[18] However, if the role of price competitiveness will turn out to be insignificant, 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 also with more stable patterns for labour remunerations, and more concentrated, for instance, in high value-added sectors. Vice versa, in case price elasticity was strong and significant, this could lead us to a perplexing conclusion: strategies for the recovery would be the same ones which engendered the crisis. In fact, several works already suggest that the trends in income distribution – and the ensuing differentials in cost competitiveness across countries – should be considered one of the determinants of the GFC and the European conundrum.

Our evidence suggests that both price and non-price competitiveness mattered in influencing export, with the expected sign, before the GFC. At the same time, further research is needed to better assess and disentangle the drivers of export at the country level: this would first identify distinctive national export profiles, and second it could be useful to examine how national practices and institutions – particularly in the labour market – may have contributed to shape export performances and the patterns of international specialization. Concerning this latter point, this will also help in verifying if Scandinavian and Continental Europe economies are effectively more oriented in intercepting high-quality markets (in both manufacturing and services), while on the contrary Mediterranean economies have been competing in more price-elastic items, as it seems to emerge from the recent literature on Europe.

A methodologically sound, long-term and country-specific estimation of the export elasticity to both price and non-price factors will finally contribute to providing evidence for two policy issues: how to get out of the never-ending phase of stagnation in the Euro area, and which strategy each country is currently adopting to recover. This

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of price competitiveness (for instance, unit labour costs or REER based on different deflators) and non-price competitiveness (that is, some of the metrics reviewed in Section 3).

[18] 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, this would not be sustainable in the long run as deficit countries cannot experience a 'permanent' external deficit (see Giavazzi and Spaventa, 2010; and Cesaratto, 2015, for an alternative view). The United States represents a remarkable exception, mainly due to the international predominancy of the US dollar as a reserve currency.

will also foster the debate on which policies should be promoted to sustain equitable growth and escape the phase of stagnation which characterized Eurozone countries after the GFC, even if we left aside the pandemic-induced economic collapse of 2020. In case most European countries were currently adopting neo-mercantilist policies because their export is effectively price-sensitive, we would face a 'dog chasing its tail' problem, as it would make sense, for a single country, to cut wages to promote export. If this will be the case, these results might cast an unsettling light on the prospects for a European recovery.

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