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Identifying barriers towards a post-growth economy – a political economy view

Abstract: In this paper, we take a political economy perspective on barriers that inhibit a transition beyond the growth-paradigm – that is, we frame transition barriers as looming conflicts of interest. Specifically, we investigate potential transition barriers within three case studies. First, unemployment represents the most commonly cited reason why economic growth is considered indispensable. Second, alternative indicators to Gross Domestic Product (GDP) have not succeeded in replacing GDP as a standard metric of economic welfare. Third, pension schemes rely on economic growth to offset demographic change. In each of these three examples, we identify actor-interest constellations that foster the status quo of a growth economy. We conclude that compensating some of those actors who would presumably be worse off in a post-growth economy may be necessary – though not sufficient – for a transition.

1 Introduction

A puzzle: some policy proposals for a post-growth transition draw on well-known and rather uncontroversial arguments and yet they find only scant implementation in practice. Consider working time reduction (e.g. Pullinger 2014, Zwickl et al. 2016). In 1930, Keynes had famously asserted his expectation that within hundred years the average work week would be reduced to fifteen hours; also, his fellow economist John Hicks in 1946 declared working-time reduction a useful means of avoiding "secular unemployment" (cited in Bosch and Lehndorff 2001: 210); and Ludwig Erhard, generally credited as the father of Germany's "economic miracle" in the 1950s and 1960s, assumed that the day where increases in leisure would be preferred to increases in material consumption would inevitably arrive (Erhard 1957: 233). Nevertheless, productivity gains in the last decades have mostly been translated into increased income as the average usual weekly hours worked on the main job in the OECD still stand at 40.4 in 2016.[1] For another example, recall the persistence of gross domestic product (GDP) as the leading indicator informing policy guidelines around the world – a widely acknowledged misuse of a metric that merely records output. For instance, the Stiglitz-Sen-Fitoussi commission, assigned by then French president Sarkozy stated: "it has long been clear that GDP is an inadequate metric to gauge well-being over time particularly in its economic, environmental, and social dimensions, some aspects of which are often referred to as *sustainability*" (Stiglitz et al. 2009: 8, emphasis in original). But even though numerous alternatives to GDP have been designed, none of them has dethroned GDP in practice. So why have such seemingly broadly appealing causes as working-time-reduction and replacing GDP not been implemented on a much wider basis?

A recent paper on barriers for alternative indicators to GDP (Bleys and Whitby 2015) points to a number of possible reasons for inertia, such as context (e.g., financial crisis), the alternative indicators themselves (e.g., lack of standardized methodology) and user factors (e.g., distrust of monetary aggregation). Even though these factors may be relevant, they do not inform a crucial question, to wit: *which actor-interest constellations foster the status quo?* We argue that identifying the interests opposed to a transition (i.e., politico-economic barriers) beyond the growth paradigm has not yet received sufficient attention. This negligence may potentially backfire in that there is lot of "preaching to the choir" (van den Bergh 2011: 886) – that is, specific proposals persuade only post-growth advocates, but yield no substantial progress in terms of identifying and overcoming transformation barriers. While a range of obstacles, such as the above-mentioned ones, may inhibit the transition in various contexts, politico-economic barriers may be particularly important because opposed interests might actively try to subvert any transition efforts.

Regarding this issue, the literatures on transitions to sustainability and beyond growth exhibit some shortcomings. For instance, proponents of the Multi-Level-Perspective emphasize innovation as the key aspect of sustainability transformations and have only recently acknowledged the need to address the destabilization of current system configurations (cf. Geels 2014, Geels et al. 2017). Overall, regime resistance and politico-economic barriers have not been at the focus of the transition literatures

1 In the very long run, since the apex of industrialization, full time work weeks have become much shorter (Bosch and Lehmdorff 2011: 214ff.) whereas in the last decades they have only incrementally declined – from 42.1 hours in 1983 to 40.4 hours in 2016, which implies a four percent decrease over thirty years. By comparison, productivity across the OECD – measured in GDP per hour worked – has increased by 20 percent between 2000 and 2015; accordingly, keeping total GDP constant would have allowed reducing working time by 17 percent since the turn of the millennium alone. (source for OECD working time data: https://stats.oecd.org/Index.aspx?DataSetCode=ANHRS; for productivity data see: https://data.oecd.org/lprdty/gdp-per-hour-worked.htm).

(see also Strunz 2014, de Jesus and Mendonça 2018). Very few studies explicitly identify post-growth barriers: Antal and van den Bergh (2013) focus on macroeconomic barriers arising, amongst others, within the financial system. Buch-Hansen (2018) proposes general prerequisites for a degrowth paradigm shift from a transnational historical materialism view. The growth-employment nexus as a possible transition barrier has been analyzed rather extensively (see section 3.1). Most pertinent politico-economic studies, such as those investigating interest constellations within the climate and energy sector (e.g., Jenkins 2014, Gawel et al. 2014, Strunz et al. 2016), however, do not explicitly relate to the post-growth discussion. So, what the literature seems to be lacking, is an inventory of interests opposed to a post-growth transition.

With reference to such conflicting interests, the environmental economics literature has long emphasized that, though environmental regulation will often lead to an increase in overall welfare, it might fail to establish a Pareto-improvement, as producers and consumers of environmentally damaging goods will be worse-off (e.g., Buchanan and Tullock 1975; Downs 1973; Fullerton 2011). Consequently, environmental policy runs the risk of being blocked or disfigured by well-organized interest groups (consider the climate change counter-movement in the US, see Brulle 2013). Therefore, in order to develop politically feasible (i.e., democratically legitimated) approaches, various mechanisms to compensate potential disadvantaged parties have been proposed (e.g., Bovenberg 2001; Gersbach and Requate 2004; Fischer 2001; Fredriksson and Sterner 2005; Sterner 2006). Some of these have seen application in practice, such as the step-wise shift from initial "grandfathering" toward auctioning of emission permits in the EU emissions trading scheme instead of a complete auctioning from the start.

Thus, insofar as the post-growth transition restricts the exploitation of environmental resources, it will face severe political resistance regarding the redistribution of resource rents. Moreover, potentially (or even intentionally) cropping economic growth rates is likely to face additional resistance from those who currently profit from GDP-growth – any increase in overall welfare notwithstanding. Still, some radical critics of the growth paradigm call for institutional rupture, thereby sidelining more reformist, let alone compensation approaches (e.g., Deriu 2012, Klein 2014). Thus, we find a somewhat paradoxical situation: some hope for radical institutional renewal whereas specific proposals that enjoy widespread support, such as working-time reduction and alternative progress-/welfare indicators, do not find much application in practice. Moreover, it remains open whether and how those institutions, which the more radical critics, too, would like to keep, can be transferred to and financed within a post-growth economy. For instance, Demaria et al. (2013: 203) argue that "some form of social security and public health, public kindergarten and schools, or some other elements of the welfare state" need "to be defended" – but they are silent on what this demand might entail more specifically.

This, in turn, is the starting point of present paper: it aims to identify relevant actor-interest constellations that inhibit the transformation beyond the growth paradigm. In principle, all actors profiting from GDP-growth should be taken into account. Our basic presumption is that in order to understand the persistence of the growth paradigm, an identification of these politico-economic transformation barriers is indispensable. To do so, we employ a political economy perspective (Mueller 2003). This perspective centers on the self-interest of all actors involved in the political process in representative democracies – voters, politicians, interest groups and bureaucrats. Based on this perspective, we analyze three specific examples of transition barriers. First, unemployment represents the most commonly cited reason why economic growth is considered indispensable since without overall growth of economic output, productivity gains might increase unemployment. Second, alternative indicators to GDP have not succeeded in replacing GDP as a standard metric of economic welfare. Third, pension schemes rely on economic growth to offset the demographic trend toward population ageing in many countries. In each of these three examples, we rely on the political economy perspective to identify actor-interest constellations that prolong the status quo.

Against the background of these examples, the following question arises: how to achieve sufficient consent of those actors whom the 'turn of the tide' caused by a post-growth transition would leave worse off?[2] In short, there will be no transition without addressing conflicts of interest. Assuming that these conflicts are to be mitigated in a peaceful and democratically legitimated way, compensation may be one (but not the only) inevitable consequence where persuasion does not succeed. As we will see, the arising cleavages are more complex than "capital vs. labor" or "the 1% vs. the 99%". While reduction of economic inequality may represent an important cornerstone of transition policies, the transition also pins different regions, different generations or different administrations against each other. Thus, the present paper seeks to remind post-growth proponents that the transition requires more than the collection and elaboration of techniques that will formally result in a sustainable rate of material throughput (e.g., Daly 2017:101). Rather, deliberate strategies to overcome political economy barriers to change have to be developed.

The rest of this paper is structured as follows. Section 2 outlines the conceptual framework by introducing the basic assumptions of the political economy perspective and by providing a working definition of post-growth economy. Based on this framework, Section 3 analyzes which actor-interest constellations inhibit the post-growth transition within the three examples of unemployment, alternative welfare indicators and pension schemes. Section 4 discusses the results and Section 5 summarizes briefly.

2 Conceptual Framework

2.1 The political economy perspective

As conceptual framework, this paper draws on the assumptions of the political economy literature. This perspective focuses on the self-interest of different actor groups within institutional settings as main explanatory variable for the societal allocation of rents: through the co-evolution of actor groups and institutions, the well-organized actors obtain more rents at the expense of the less-organized actors. In Buchanan's (1984) words, the political economy perspective comes down to a "politics without romance" view. More specifically, the following assumptions are made regarding the rationale of actor groups in representative democracies:

- *Voters* decide rationally. That is, they aim at maximizing their utility according to their preferences. Thus, voters' self-interest constitutes an important explanatory variable for voting behavior (Downs 1957).
- *Interest groups* engage in rent-seeking. That is, they aim to influence regulation in their favor. Different interest groups compete in this quest, for instance via public campaigns and direct lobbying of politicians. Eventually, well-organized interest-groups succeed in steering rents in their direction; they do so at the expense of the wider public and their less well organized competitors (Olson 1971, Stigler 1971).
- *Politicians* act as transfer brokers between different interest groups. They allocate rents so as to maximize stakeholder support and thereby maximize their chance of electoral success (McCormick and Tollison 1981), which, in the end, is awarded with income, power and prestige (Downs 1957).

2 This is not to say that economic growth necessarily makes everyone better off: the political economy perspective also implies that private interests can be framed and disguised under the trickle-down narrative that growth naturally benefits everyone. Empirically, the benefits from economic growth have been highly unevenly distributed in the past (e.g., Milanovic 2016, Piketty 2014).

- *Bureaucracy*, far from representing a simple executive body, pursues its own agenda (Niskanen 1971). Bureaucrats do not just implement policies – on the contrary, they also follow their self-interest, aiming at increasing their competencies both as regards the conception of policies and budgetary discretion. Different ministries compete for regulatory influence, executive power and budget.

Overall, these assumptions frame politics as the interactions among self-interested actors like politicians, voters, lobbyists and civil servants (e.g., Dietz and Vollebergh 1999). Self-interest here refers not only to income but to status variables such as prestige and power, too.[3] This framework also explains why environmental interests (if prevalent) are commonly disadvantaged: they are dispersed throughout the population and represented mostly by non-governmental organizations. By comparison, industry interest groups tend to be well-organized and well-funded, which may lead to regulatory capture and inadequate environmental policy (Kirchgässner and Schneider 2003, Kollmann and Kirchgässner 2010, Dal Bó 2006).

How can the political economy framework be justified in the context of this paper – given that many growth critics attack the assumed "unrestrained pursuit of short-term self-interest" (Kallis et al. 2012: 173) within the growth paradigm? Three reasons justify the political economy perspective. First, many actual post-growth policy proposals, "are national top-down approaches, focusing on government as a major driver of change, rather than local bottom-up approaches" (Cosme et al. 2017: 321). Understanding barriers to top-down policies, therefore, requires an apt explanatory framework for policy formation – such as the political economy perspective. Second, and more generally, in order to overcome transformation barriers, the mechanisms of current political systems need to be accounted for (even if they are to be criticized from a normative point of view): "The political process cannot be assumed away if we are to actually make the transition to sustainability" (Klitgaard 2013: 280). Third, self-interest constitutes a fundamental category of human behavior whose relevance transcends the growth paradigm: thus, deliberative accounts of democracy, as often favored by post-growth proponents, also need to come to terms with "constrained self-interest" and coercive power in democratic processes (Mansbridge et al. 2010).[4]

This political economy framework may also be extended to encompass value-rationality (i.e., actions are assessed with reference to a system of values). For instance, the politicians' own ideological motivations have been incorporated early on (e.g., Peltzman 1976). Generally, the same individual may exhibit different motivations in different roles and contexts (e.g., Nyborg 2000). An individual may approve the goals of a post-growth transition as a citizen and still oppose a specific transition policy as a tax-payer and consumer. For instance, consider the empirical finding that public concern about climate change significantly declined in the wake of the financial crisis, suggesting that people's immediate economic concerns outweighed their environmental concerns (Scruggs and Benegal 2012). Overall, interests, values and institutions are to be seen as interdependent (May and Jochim 2013). So, the point of the political economy framework is not to deny individuals' value-rationality, but to think of values not as 'prior' or somehow more fundamental than self-interest but rather as complementary and interacting drivers (self-interest may also be disguised as ideology). A comprehensive investigation of the complex interactions between different values and self-interest, however, is beyond this paper's focus.

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3 Also note that actual choices are contingent on individuals' bounded rationality and context-specific restrictions such as transaction costs.

4 "The regulative ideal of absent power in deliberative interactions prescribes reducing to a practical minimum the threat of sanction and the use of force against another's interests" (Mansbridge et al. 2010: 82).

2.2 Beyond the growth paradigm

In the following, we provide a sketch of what we mean by "post-growth transformation". We prefer the term "post-growth", which is very popular in the German-speaking countries (e.g. Paech 2012, Seidl and Zahrnt 2010) to "degrowth". This is not only because the prefix "post-" indicates the aim of going *beyond* the current paradigm, but also for two other reasons. First, degrowth comprises a heterogeneous range of positions, some of which radically oppose the institutions of democratic capitalism and explicitly call for revolutionary system change (see Asara et al. 2013, as well as the empirical study of attendants to the 2014 degrowth-conference by Eversberg and Schmelzer 2018). By comparison, this paper remains committed to a more reformist perspective, essentially asking what it would take to leave the growth paradigm behind, given the prevailing democratic settings.[5] Second, we concur with van den Bergh (2011: 889) that, while downsizing of the economy may be the inevitable *result of* adequate sustainability policies, it is "at best blunt, ineffective and inefficient" as a sustainability policy by itself. Furthermore, Daly (2017: 85) points out that "[t]here are generally always possibilities of better allocation – more of something desired in exchange for a reduction of something less desired". In other words, degrowth's emphasis on overall downsizing over economic re-organization might be misguided.

Thus, the perspective advanced here basically follows van den Bergh's (2011, 2017) plea for agnosticism with respect to economic growth. A tentative characterization of a post-growth economy (or "a-growth", as suggested by van den Bergh – ultimately, terminology is not decisive here) might refer to three specific features or conditions:

(1) material throughput is in line with ecological limits,

(2) GDP does not inform major policy decisions,

(3) resource and energy productivity gains are translated into decreasing material throughput, labor productivity gains into more leisure until condition (1) is satisfied.

(1) is a core motivation of post-growth transition efforts – for the purposes of this paper, it suffices to highlight the urgency of limiting material throughput (e.g., Paech 2012). (2) implies that GDP has ceased to attract much interest, possibly with the exception of economic statisticians who record the output of the economy. The broad lines of economic, social and environmental policies orient themselves towards broader indicators of sustainable well-being (Costanza et al. 2014). Emphatically, (3) presupposes that productivity gains will on average *not* be absent in a post-growth economy – on the contrary, reorganizations and qualitative development represent a desirable feature of an economy in line with ecological limits (Daly 2017). In a sense, as pointed out by Aldred (2009: 66), it can be regarded as an artifact of the GDP indicator that it registers (3) as non-growth. Summing up, a post-growth economy, in our view, exhibits increases in productivity (with technological progress less resource inputs or less work is needed to produce a unit of output) but not in material throughput.

Connecting this miniature sketch together with the theoretical approach outlined in the preceding subsection puts the analytical focus on the distributional consequences of a post-growth transition. Within the growth paradigm, income generating structures have evolved that crucially depend on the continuous increase of material wealth: There are growth-dependent business models, policy

5 Broader institutional change may well be normatively desirable and form part of a post-growth transition, yet we do not follow those who rule out the compatibility of representative democracies and post-growth institutions in the first place and who assert that the growth paradigm has completely undermined democracy: for instance, Deriu (2012: 56) disparagingly refers to the "so-called democratic countries" where "citizens are in fact at the mercy of immense and impersonal powers".

entrepreneurs whose electoral success is closely tied to the increase of income of their electorate and bureaucracies whose budgets and political influence might shrink in the face of a post-growth economy's tighter environmental regulation. Generally, all post-growth induced redistributions face potential resistance from those who will be worse off.

2.3 Selection of case studies

In order to get a more precise picture of the emerging conflict lines, we now turn to three specific case studies. The first case study, unemployment, is selected because it relates to a widely shared political talking-point about the necessity of economic growth: growth is purportedly needed to combat unemployment. In direct response to this claim, the post-growth literatures have discussed possible remedies. For instance, Levy (2017: 316) has labeled working-time reduction as „the iconic reform for the degrowth movement".

The second case study, alternative indicators to GDP, also points to long-standing debates: The limitations of GDP as a reliable indicator for happiness or even material wealth have been widely and for quite some time acknowledged, not only in the post-growth movement. Indeed, Kuznets as one of the main architects of the US national accounting system already in the 1930s hinted at the indicator's severe limitations (Costanza et al. 2009: 7 f.). Still, alternative progress-/welfare indicators have not seen noteworthy applications in national policies.

The third case study is different in that the welfare state has been scarcely addressed in the post-growth literatures. Exceptions are Seidl and Zahrnt (2010) and the recent volume by Büchs and Koch (2017). Still, as evidenced by the above citation (Demaria et al. 2013), some seem to take the existence and functioning of the welfare state within a post-growth economy for granted. Against this backdrop, we argue that it might be challenging to adapt the welfare state to a post-growth environment. Specifically, we focus on pension systems because the latter already struggle within the context of currently declining growth rates.

This paper does not aim to cover *all* politico-economic transition barriers. For instance, other social security institutions, such as health care, could also be subject to important barriers. The selected case studies illustrate the variety of potential conflicts. Specifically, in case studies one and two, the politico-economic dimension helps to shed some light on the lack of practical implementation of frequently proposed policy responses. By comparison, the third case study indicates a potential problem field that has gone almost unnoticed in the post-growth literatures.

In the following, we aim to identify actor-interest constellations that impede a post-growth transition within each case study.

3 Case Studies

3.1 Unemployment

Broad empirical evidence attests to a negative correlation between growth and unemployment in market economies: when aggregate demand and output fall, this is usually accompanied by a rise of the unemployment rate (e.g., Lee 2000; Sögner and Stiassny 2002). The degree of responsiveness of the unemployment rate to output varies from country to country, but overall, the relationship is so stable that economists refer to it as "Okun's law" (see Ball et al. 2013). What creates this relationship? While one possible causal direction is that decreased employment leads to a reduction of output growth, the relationship can also point into the other direction and be interpreted as a "productivity trap" of market economies (Jackson and Victor 2011): If continuously increasing labor productivity implies that less and less labor is needed to produce the same amount of goods and services, then, *ceteris paribus*, output growth is necessary to avoid a rise in unemployment.

As long as income from labor is a key mechanism of distribution of wealth, a post-growth perspective poses the question of whether and how this productivity trap can be overcome since a simple reduction in growth rates might severely increase unemployment (Antal 2014; Victor 2008). Antal (2014) reviews several strategies in this regard, e.g., environmental fiscal reform or increasing public employment. Two of these strategies have particularly resonated within post-growth related publications: Working time reduction (e.g., Antal 2014; Büchs and Koch 2017: 117 f.; Cosme et al. 2017; Kallis et al. 2012, 2014; Martínez-Alier et al. 2010; Passadakis 2015; Pullinger 2014) and a structural shift towards low-productivity sectors like nursing, education or volunteer work (e.g., Antal 2014; Jackson 2009: 130 ff.; Jackson and Victor 2011; Paech 2012).

Especially the idea of a substantial working time reduction has found a positive echo within the post-growth literature. However, ignoring the question marks regarding whether working time reduction is suitable for effectively limiting economic output or consumption (for different conclusions see Du et al. 2013; Keizer 2011:49 ff.; Pullinger 2014: 12 f.),[6] respective policy measures risk to further accentuate the cleavage between high and low income workers. On the one hand, high income workers might profit from a shift from work to leisure, as higher occupational functions like lawyers tend to work longer than they would do according to their own preferences (Estevão and Sá 2008:4 ff.). Collectively binding working hour reductions would thus end a classic prisoner's dilemma and result in higher overall utility for this group as marginal utility from work income and leisure converges.

On the other hand, workers with low hourly wage can rather be expected to opt for long work hours in order to raise sufficient income. If working time reduction is, for example, implemented as a mandatory and blanket decrease of hours worked, it risks distorting individual allocation of time between work and recreation and might yield severe budget problems for low income households. Even if this is not the case – for example, when only future productivity gains are translated into reductions of working time, thus keeping income constant –, a reduction of working time is, *ceteris paribus*, likely to increase the disparities between low and high income workers as the former might not gain as much utility from increased leisure due to income constraints or less favorite working conditions often accompanying their work. As Hayden (2006: 529) notes in his evaluation of the 35 hour week in France: „For some employees, WTR [working time reduction] opened up new leisure opportunities including more short-term travel, while for others with insufficient incomes and less predictable schedules, it could mean more idle time in France's dreary working-class suburbs". Therefore, it is not surprising that acceptance of the income loss induced by working time reduction is higher in high income brackets (ibid.).

Acceptance of policies to reduce working time might even further decline as firms sometimes use this occasion to circumvent social security contributions for their employees (e.g., Levy 2017:316), which is one reason why labor unions have sometimes opposed such changes in the past (e.g., Keizer 2011:150; Levy 2017:314). Even if working conditions remain unchanged, securing consent with many workers, conflicts with employers might arise because the employment of part time workers usually means additional administrative and transaction costs for firms (Zwickl et al. 2016: 249). In general, business interest groups prefer fewer employees with longer hours and, therefore, tend to object reductions of working time (Pullinger 2014:17). Thus, in addition to the potential conflict

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6 Some empirical studies rather indicate, that welfare might actually decrease due to the deterioration of working conditions, as often employers do not hire additional workers in response to WTR-policies but instead simply increase work intensity for the unchanged staff (Hayden 2006:529; Keizer 2011:150).

between low- and high income workers, struggles between employers and employees are to be expected.

The remedy sometimes offered especially to the problem of increasing inequality within the workforce is a higher hourly wage for low income workers (Hayden 2006:529; Pullinger 2014: 16) or even the preservation of the full income (Passadakis 2015:105). However, if this is directly facilitated by wage increases, prices will rise, and, in consequence, demand, output and employment will fall (Antal 2014: 282; Estevão and Sá 2008:3f; Hunt 1999). This “lump-of-labor fallacy” (Estevão and Sá 2008:3) and resistance by entrepreneurs against higher wages (e.g., Hayden 2006: 504) might be circumvented if income compensation is established via public subsidies. The vast extent of subsidies necessary to compensate for a substantial working time reduction, however, would constrain public spending in other areas or pose the need for tax increases and thus simply shift the conflict to other areas.

Alternatively, working time reduction could be introduced or promoted as a voluntary option. Especially those with high hourly wages can be expected to opt for reduced hours, at least in places where the above mentioned competition for longer working hours is not prevalent. Though in this scenario rising income inequality is simply replaced by rising leisure inequality (Pullinger 2014:17), this disparity might lead to less resistance by those (relatively) worse off because of its non-pecuniary character. However, in the absence of empirical evidence on this matter such conclusions remain speculative. Furthermore, it has to be taken into account that this scenario might imply non-trivial frictions in the labor market (transfer of high paid work to hitherto low paid workers with potentially inadequate skills).

The second proposal discussed here to prevent rising unemployment in a post-growth society consists of shifting labor to low productivity sectors (e.g., personal services like nursing). This could be facilitated, for example, by establishing or expanding mandatory health insurance which will lead to an increased demand for and consequently supply of health care services. Such an approach, however, is also riddled with conflict potential. If wages in the low-productivity sectors remain low, more and more workers will find themselves in relatively low paying jobs compared to those in high-productivity sectors. Then again, employers in the low-productivity sectors need to pay wages that are competitive with the rest of the economy so as to avoid losing staff. However, in this case these sectors face what is called Baumol’s cost disease (Baumol 2012): the costs of personal services rise compared to the costs of other goods and services (e.g., Bates and Santerre 2013 on the health sector). Why is this a political economy issue? With the state as a major provider of these low productivity services an increase of the public sector share in GDP is to be expected. This, in turn, will fuel the resistance from advocates of a lean government. In other words, if more and more nursing activities and the like are carried out on behalf of the government, already existing tensions between opponents and supporters of the welfare state will increase. Overall, structural shifts to the low-productivity sector are hampered, either by rising income inequality or by Baumol’s cost disease.

In sum, conflicting interests impede two key strategies to combat unemployment in a post-growth economy. Working time reduction risks new cleavages between different groups of workers, employers and employees as well as between the workforce and the workless. A shift toward low-productivity sectors needs to overcome vested interest-driven pressure against increasing social welfare budgets. While other options to decouple employment from growth (e.g., environmental fiscal reform, increasing public employment, see Antal 2014) could be taken into consideration, it is easily conceivable that these will ignite conflicts of some sort as well (resistance from eco tax payers or against rising or shifting public budgets).

3.2 Alternative welfare indicators

GDP growth still constitutes a key figure for political success – even though several proposed alternative indicators look beyond economic activity and, therefore, better reflect overall welfare and societal progress (Costanza et al. 2014; Stiglitz et al. 2009; van den Bergh and Antal 2014). Several reasons might explain GDP's persistence. First, GDP and its growth rate correlate to or even define a range of politically significant aspects (e.g., unemployment as discussed in section 3.1, or public debt sustainability which is assessed using the debt-to-GDP ratio). Second, alternative indicators sometimes lack sufficient or sufficiently uncontroversial data (Bleys and Whitby 2015: 167 f.). Third, many alternative indicators aggregate and weigh different factors – in other words, they require delicate value decisions. For instance, it is debated whether human and natural capital can be combined into one single indicator (Kubiszewski et al. 2013: 58). Therefore, the GDP indicator is appealing for its simplicity compared to such composite indicators. Still, these reasons might not provide the complete picture of why none of the alternatives has at least complemented GDP as a political lead indicator (the latter could still be used to inform technical economic decisions). In this subsection we argue that even if the above mentioned obstacles are removed, a rapid introduction of alternative indicators is unlikely due to hitherto neglected political economy barriers.

Generally speaking, substituting alternative welfare indicators for GDP creates resistance by those benefitting from GDP as lead indicator. First and foremost, this concerns politicians. Two different motives for resistance can be distinguished: For one, those politicians forming the government and its supporting parties might face a critical re-evaluation of their current performance or political legacy once another indicator is applied. As some studies have shown, including environmental damages and other neglected welfare aspects into national welfare accounting yields far less favorable results than GDP often does and sometimes even indicates decreasing wealth in comprehensive terms (e.g., Kubiszewski et al. 2013). Any government deciding to replace GDP thus might severely damage its chances for reelection. It may be no coincidence, therefore, that the former French president Sarkozy initiated a report on alternative welfare indicators precisely when growth-predictions in terms of GDP were quite unfavorable (van den Bergh 2017: 201 f).

A second, similar reason for politicians not to abandon GDP could be that a re-evaluation of their policies undermines their relative power position within the political system. The failed initiative to launch a Green GDP in China in 2006 provides a vivid example: Li and Lang (2009) and Steinhardt and Jiang (2007) documented that the once promising reform project, which had already been successfully tested at selected regions, was eventually scrapped due to fierce resistance by local politicians. With the Green GDP results arriving at a nationwide level, including data for every region, many local cadres were confronted with an imminent loss of political influence and prestige as their regional economic performance would have been rated more negatively while other regions would suddenly be better off (Section 4 discusses why prospective losers' resistance might often outweigh winners' support).

Local politicians, however, were not the only source of resistance against accounting reforms: The case of China's atrophied Green GDP initiative illustrates that also within the bureaucracy struggles emerged. Li and Lang (2009: 54) cite a leading engineer of the Chinese State Environmental Protection Agency (SEPA) with the point of view that the agency's frictions with the National Bureau of Statistics (NBS) contributed even more to the reform's failure than the resistance by local cadres.

While in this case the NBS appears to have acted as a proxy for various political agents in the background (ibid.), it is easily conceivable that public administrations interfere on their own accord. If sustainability inspired post-growth policies lead to more stringent and wide-ranging environmental policy measures, ministries responsible for environmental protection will probably enjoy greater competencies and budgets, as it is well known that assigning these tasks to agencies with different foci might compromise their success (e.g., Schucht et al. 2001: 272 f.). This competence shift implies a relative decline of influence and possibly also budgets of traditionally predominant ministries (e.g., of finance or commerce), which, therefore, possess an incentive to obstruct alternative accounting measures (Bleys and Whitby 2015: 168). What is more, in case the national accounting procedure, which usually is not in the environmental ministry's domain, is and remains subordinate to a potential loser of the reform, the responsible bureaucrats have ample opportunities to thwart the transformation process by using technical difficulties as a pretext.

Alternative welfare indicators also face other challenges. Interest groups from polluting industries can be expected to oppose "green" indicators insofar as these might trigger stricter regulation of the dirty sectors of an economy in order to improve on the indicator's ecological dimension. This rather abstract threat to profits is indeed taken quite seriously by the potentially affected firms: for instance, in 1994 a green accounting proposal in the US "was killed by the coal industry" (Costanza et al. 2014: 285).

In sum, the persistence of GDP as a lead indicator for policy decisions is unlikely to be rooted in technical issues alone. On the contrary, the Chinese example indicates that methodological and other content-related challenges are sometimes simply a pretext in order to conceal certain interests. Li and Lang (2009: 54) conclude that "discordance over the [Green GDP] report's technicalities and content, in a sense, seem to be only a façade, disguising the more fundamental local resistance and their organised lobbying efforts at the central level". Attempts to replace or at least complement GDP with an alternative indicator potentially threaten the self-interest of a range of actors (bureaucracies, governments and interest groups) on different scales.

3.3 Pension schemes

In a nutshell, existing pension schemes rely on economic growth to offset demographic change. As pensions are to be understood as claims on future output (e.g., Barr 2004), demographic change in the form of ageing populations means that meeting these claims becomes more difficult: pensioners can consume only those goods and services that are produced and provided by the currently working generations. Against this background, a growing economy permits the distribution of goods and services towards the growing older generations while easing the additional burden on the younger generations. Let us illustrate the scale of the challenge: the old-age dependency ratio in the OECD, that is, the number of people aged 65 and older per 100 people of working age has doubled from 1950 to 2015, with another doubling projected by the year 2075: a ratio of 75 (+65) to 100 (working age) is expected by then (OECD 2017: 122 f.). Pensions are often the largest single item of public social expenditure, accounting for almost a fifth of total government spending (OECD-average) in 2013, with a clear upward trend (OECD 2017: 142). One crucial issue, therefore, is how to cope with demographic change without growth?

The two most common pensions schemes are pay-as-you-go (PAYG) schemes and funded schemes. In PAYG-schemes the currently young generations directly finance the pensions of the current retirees. By implication, the effects of demographic ageing are completely transparent: economic growth is necessary to avoid pension reductions or increases of the younger generations' contributions. In funded schemes, pensions are financed from capital accumulation in pension funds: the latter pool individual contributions, investing them in a variety of assets like equities and treasury bonds. This is another way of saying that pension funds count on real economic growth (assuming that financial assets reflect real forms of capital). In the context of low- or zero growth, returns on investments will be lower compared to the fund managers' expectations at the time when future pensions were calculated. "Consequently, pension funds offering defined-benefit promises and life insurance companies that have sold products with high-return guarantees may have difficulty fulfilling these promises" (Antolin et al. 2011: 238). As a result, pension funds may seek higher yields via riskier investments, that is, they may engage in "gambling for redemption" (ibid.: 239). And indeed, empirical evidence demonstrates that pension funds tend to high risk investments in a low-interest environment (Boubaker et al. 2017). Alternatively, adaption to a post-growth economy can succeed by anticipating lower returns and gearing investments towards sustainable development (see Della Croce et al. 2011). Nevertheless, it should be clear that i) both PAYG and funded schemes face the challenge of demographic ageing and ii) the working logic of current pension funds combined with the overall trend to extend such schemes impede rather than facilitate the prospects of a post-growth transition (Seidl and Zahrnt 2016).

Overall, the double challenge of demographic ageing and post-growth transition means that either pensioners will have to receive less or work longer and/or contributions of the working generations will have to rise. Which actor-interest constellations inhibit such adaptations? First, older generations can vote or lobby against pension reductions or longer working times. High participation rates of elderly voters in elections, combined with rising life expectancy entails a strong impact on public policy – Sinn and Übelmesser (2002) even predict a "path to gerontocracy". Empirically, the elderlies' electoral preferences for generous pension systems, and, in consequence, their impact on agenda setting and social policy making, have been clearly demonstrated (e.g., Campbell 2003, Bonoli and Häusermann 2009). As one example of politicians' catering to the interests of elderly voters consider the German Conservative Party's promotion of a "mothers' pension" (*Mütterrente*) during the run-up to the German federal election in 2013. The measure, which constituted one of the Conservatives' main campaign pledges, promised higher pensions associated with child care times. Following the Conservatives' electoral victory the measure has been implemented, its cost being borne by those currently paying pension contributions and by non-eligible pensioners (Bach et al. 2014).

While demographic ageing and lower electoral participation rates imply a weaker and less well organized representation of the younger generations' interests (compared to elderly voters)[7], these interests also find a very well-organized ally: the interest groups of the business and industry sector lobby against increased pension contributions by the working population. These interest groups object to any increases in labor costs, among them higher pension contributions. Hence, pension contributions are regularly framed as a "drag on competitiveness". For instance, a position paper by Businesseurope, a lobby group representing enterprises and national business federations in Europe, explicitly argues that a main goal of pension reforms should lie in sustaining economic growth: one of Businesseurope's "key messages" says that pension schemes should be continuously reformed in order to ensure their financial viability and "to avoid negative impacts on economic growth" (Businesseurope 2012: 1). Similarly, the "Initiative New Social Market Economy", a think tank funded by the German employers' association of the metal and electrical industries, lobbies against "pension gifts" and calls for an upper limit on social security contributions which are said to not only put a strain on the working population but also on the competitiveness of many enterprises (INSM 2015, Pellengahr 2017).

Against this background, politicians who aim for (re-)election and intend to minimize interest group resistance have the incentive to increase tax-funding of pensions, particularly PAYG schemes. Tax-funding enables concealing distributional effects between generations within the wider, elaborate tax framework. Thus, one may exploit the "fiscal illusion" by the tax payers who underestimate the financial burden for a specific government activity – in this case, pensions – because they are not

7 However, the working age population may resort to a number of protest and evasion strategies (from leaving public schemes to strikes and emigration) so as to minimize pension contributions, so part of the burden of demographic ageing might fall on pensioners (see Breyer and Stolte 2001).

aware of all the revenue sources (Mueller 2003: 221). So not surprisingly, the tax-funding route is increasingly taken (see Seidl and Zahrnt 2016 for Germany). Tax-funded programs targeting the elderly may, in turn, crowd out other forms of spending: in the US, for instance, programs like Medicare (a healthcare program for people over 65), have been extended, "even as other programs for the poor [were] cut" (Campbell 2003: 2).

Summing up, a post-growth transition would not introduce novel challenges to pension schemes. Rather a post-growth transition would aggravate the already existing pressures on pension schemes due to demographic ageing and the recent trend toward "secular stagnation" with excess savings, low growth and low interest rates (IMF 2016). As a result, age can be expected to further intensify as a distributional conflict line and tax-funding of PAYG schemes will increase. Moreover, pension fund managers that have relied on high returns from investments on capital markets in the past will not be in favor of post-growth strategies; they are likely to call for government bailouts to meet the promises incurred in defined-benefit schemes.

3.4 Beyond the individual case studies

We have discussed three important case studies in order to provide a general picture of the scope as well as the nature of politico-economic transformation barriers. Of course, other potential areas of conflict remain to be identified and analyzed. For example, pension systems are not the only institutions facing the double challenge of demographic change and declining growth rates in a post-growth economy: shrinking populations in many rural areas will increase the pressure on community budgets as infrastructure costs often cannot be reduced proportionally (Siedentop and Fina 2010). Such communities are unlikely to welcome post-growth policies as they rely on increasing per capita fiscal revenues provided by economic growth in the narrow sense in order to compensate for increasing per capita infrastructure costs. Furthermore, pension systems are only one aspect of the welfare state; other institutions such as health insurance will also face challenges in a post-growth environment. Eventually, a full mapping of all barriers and their interdependencies would be called for.

Further research also should address potential interactions between different areas of conflict. For example, consider the ambiguous role of demographic ageing regarding unemployment and pension schemes.[8] On the one hand, demographic ageing might mitigate unemployment by reducing the number of job seekers (e.g., Biagi and Lucifora 2008). On the other hand, demographic ageing also introduces potential conflicts between old and young workers – if older workers are more unionized than young ones, wage income is redistributed to the old while the unemployment rate of the old increases (Michaelis and Debus 2011). Politicians, in turn, might try to exploit pension schemes in order to reduce unemployment numbers by setting incentives for older workers to retire early (thereby increasing financial pressure for the pension scheme). Generally, the specific interrelations between both challenges will depend on a number of context-based factors, amongst others, 'is the retirement age raised in line with demographic ageing?' and 'how does demographic ageing affect labor productivity?'. The case of Japan, which exhibits comparatively low unemployment rates despite of continuously low GDP growth rates and a quickly ageing population, hints at the cultural dimension here (e.g., Genda and Rebick 2000).

8 In the unemployment case, we implicitly treated the number of workers as constant, investigating the effect of increasing labor productivity; in the pension scheme case, we implicitly held labor productivity constant, analyzing the effects of demographic ageing.

Interactions between different transformation areas can also arise because measures to overcome a specific post-growth barrier might affect other barriers as well. For instance, assume that effective measures to decouple employment from GDP growth are being implemented. In consequence, the incentive for politicians to rely on GDP as a guiding principle for their decisions diminishes, whereas alternative welfare indicators become comparatively more attractive. The other way round, if alternative welfare indicators are more widely used for public policy assessment, this might facilitate measures such as a structural shift toward low-productivity sectors, which, in turn, mitigates the unemployment issue.

Overall, taking the interactions between different aspects into account, distributional issues are likely to become even more complex. Regarding the feasibility of a post-growth transition, both mitigating and aggravating cross-impacts might result.

4 Discussion

Regarding China's failed attempt to "green" its GDP, Li and Lang (2009: 57) conclude that 'in light of these intricate [political economy] challenges, the fate of the green GDP study, as Chinese commentators have also noted, was almost predestined to failure'. This illustrates the main argument put forward here: If conflicting interests are neglected, post-growth policy proposals are likely to remain politically anemic. Within the three case studies analyzed above, conflicts arise in different ways, suggesting different remedies.

In the first case study, unemployment, working time reduction and a structural shift toward the low-productivity sector were considered as options to prevent increases in unemployment. Yet these measures may entail tensions between high and low income workers, between workers of certain sectors, between employers and employees, or between the working and the non-working population. The behavioral phenomenon of loss aversion suggests that these tensions will arise specifically if one group faces income losses compared to the *status quo* (cf. Barberis 2013). Therefore, one possible solution may consist in limiting policies of reducing working time to translating only *future* productivity gains into leisure: such more gradual – capping instead of cropping – policies might be less prone to being interpreted as material losses and could turn out more palatable. Another option that avoids loss aversion could be to focus on measures for voluntary working time reductions (e.g., flexibilization of labor regulations).

The second case study illustrates that a shift from GDP toward alternative indicators of welfare is likely to worsen the relative ranking and/or political influence of some actors. Interestingly, while the shift obviously produces winners as well – such as regions with relatively low environmental degradation –, in the case of China this did not prevent the Green GDP initiative from failure. One explanation could be, again, that the loss aversion tendency amplifies the losers' resistance relative to the winners' support. Another possible explanation is that veto players might require compensation and/or some form of face-saving opportunity insofar as non-pecuniary losses, such as prestige, occur. For instance, a region whose GDP is heavily tied to the depletion of natural resources needs a plausible scenario how to economically adapt and culturally re-invent itself under a post-GDP framework.[9] Of course, preventing conflicts in the first place might be preferable: For example,

9 Consider the example of the Lausitz region in East Germany where lignite mining is structurally important for an otherwise weak regional economy. Germany will need to gradually phase out coal power plants if it wants to meet its climate protection targets. A coal phase-out, in turn, faces resistance by stakeholders, particularly in regions such as the Lausitz where lignite is – so far – the only relevant industry (overall, a German coal phase-out is projected to incur redistributions of about 70bn €, Hecking et al. 2016).

restricting Green GDP reports at least initially to the national aggregate might save such initiatives from falling victim to regional power struggles.

In the third case study, pension schemes, a post-growth transition would aggravate the demographic challenges. In general, age may be the most relevant cleavage in interest conflicts around the welfare state (Bonoli and Häusermann 2009). Against this background, already observed tendencies towards tax-funding of pensions might thrive because tax-funding mitigates the generational cleavage with comparatively low resistance – if at the price of concealing the distributional issues at hand.

Case study	Potential conflicts of interest
Unemployment	• workforce vs. unemployed • low income earners vs. high income earners • employers vs. employees
Alternative welfare indicators	• current political elites with political legacies vs. political challengers • intra-bureaucracy conflicts (e.g., environmental agencies vs. economic departments) • regions ranked highly under GDP vs. regions ranked highly under alternative welfare indicators • “dirty” industries vs. “green” industries
Pension schemes	• tax payers/pension scheme contributors vs. pensioners • old workers vs. young workers • proponents of an expansive welfare state vs. proponents of a lean state

Table 1: Overview of potential conflicts of interest

The diversity of conflicting interests notwithstanding (Table 1 provides an overview), we might derive some general propositions from our analysis. First, contrary to ‘traditional’ conflicts of environmental policy, distributional battles amplified or ignited by post-growth policies will not be limited to natural resource users. Rather, a variety of interest constellations is likely to emerge, depending on reactions of the political or economic system to these policies. Second, the arising cleavages will be more complex than “capital vs. labor”: for instance, conflict lines may sort along regional, administrative or generational lines. Third, pecuniary redistribution may not be easily available or may not suffice. For example, the loss of political power or prestige can hardly be fully substituted for by subsidies. In addition to that, some policies, like working time reduction or choosing an alternative national accounting indicator, simply do not generate any revenue that can be distributed. Fourth, the post-growth transition could be accompanied by a substantial rise or at least shift of focus in public budgets (e.g., wage subsidies, increased social security spending), while – with sometimes low, zero and negative growth episodes – the pressure on these public budgets increases. Since tax-increases or spending cuts in other policy areas yield resistance as well, there exists no conflict-free solution.

Certainly, many people would benefit from the transition. In particular, individuals with strong ecological preferences and post-materialist values might be better off, potentially decreasing income notwithstanding. Some regions and ministries will be relative winners in the course of replacing (or sidelining) GDP with an alternative indicator. Firms specialized on ‘clean’ technologies can expect to increase their profits if environmental regulation is tightened. However, for several reasons one may doubt whether these winners will simply counterbalance losers and thus clear the way for a transition: First, as already indicated, the loss-aversion phenomenon implies that losers' resistance will be stronger than the winners' support in cases where one's losses are gains by someone else. Second, while many of the discussed losses are of pecuniary nature (less income from work, shrinking pensions or rising contributions to pension systems) and therefore specific and visible, many of the related advantages are non-pecuniary and comparatively diffuse (better environmental quality, less work related stress). The advantages may therefore fail to generate comparable political weight. Third, environmental benefits, which (presumably) represent a key advantage of a post-growth economy, are dispersed among the entire population, while income losses affect specific and well-represented interests. Fourth, according to a basic tenet of the post-growth literature, the level of consumption in rich countries has to be substantially decreased in order to allow developing countries to enjoy a comparable and thus fair consumption level within overall ecological limits (e.g., Büchs and Koch 2017: 110). In such a scenario it is unlikely that a substantial amount of winners emerges in rich countries at all. In general, experiences with other sustainability-inspired reform agendas should caution us against too optimistic expectations. For example, while the idea of environmental fiscal reform is popular with many economists and environmental NGOs, in most countries the actual share of environmental taxes of the overall tax revenue stagnates at a rather low level.[10]

Furthermore, resistance from opposing interests might be severe. Recently, the challenge to limit climate change has been compared to the abolition of slavery in the 19th century: the owners of fossil resources will be stripped of several trillions of dollars in wealth, a magnitude similar to the economic consequences of expropriating US slave owners at that time (Hayes 2014, Klein 2014). The example of slavery demonstrates both the challenge's extent and possible ways out: in the US, the abolitionist movement, which threatened the South's slave economy, was one important factor for the South's secession from the Union, and, in consequence, the American Civil War (e.g., Weingast 1998). In the UK, however, the Slavery Abolition Act 1833 compensated slave owners and thus ensured a peaceful transition.

Of course, it is neither likely nor necessary that compensation ensures full consensus among all affected parties. Too extensive endeavors in this direction might even undermine the support by core post-growth proponents, as compensations will, by definition, benefit the very opponents of such a transformation (even though the examples above warn us not to caricature the opposition as 'greedy capitalists' but to also consider the interests of labor unions or pensioners). Therefore, discussions about which conflicts can be mitigated and 'which battles have to be fought' might be unavoidable.

The latter aspects also point to the limitations of the present analysis and toward avenues for further research. First, we have focused on the losers of a transition; identifying and mobilizing the potential winners is an additional prerequisite for a comprehensive strategy to overcome transition barriers. Second, the political economy framework brings – as any perspective – specific restrictions. In particular, the general motivation for a post-growth transition and the various interactions between values and individuals' self-interest lie beyond the analytical scope of this paper. Third, a fundamental objection against our line of reasoning could be that we do not have the choice between post-growth or

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10 The revenue from environmental taxes accounted for 4 - 10 % in most OECD and non-OECD countries in 2014 (http://stats.oecd.org/Index.aspx?DataSetCode=ENV_ENVPOLICY#). These numbers still tend to overestimate the political appeal of environmental fiscal reform as they include revenues from user fees and charges with an environmental assessment base as well as certain excise taxes. Such instruments do not necessarily reflect environmental concerns (Milne and Andersen 2012: 21 f.) and are therefore no reliable indicator for the political feasibility of sustainability governance. The same applies to fiscal instruments that are formally disguised and thus counted as environmental taxes but do not provide substantial incentives to reduce the assessment base, for example due to the parallel existence of strict emission standards (e.g., Rákosi et al. 2015).

maintaining the *status quo*, but rather between post-growth or involuntary, disastrous economic contraction inevitably resulting from an impending ecological collapse (Büchs and Koch 2017: 68). Consequently, one could argue that it is misguided to base the analysis on the current distribution of power and income. However, given the high uncertainty regarding the occurrence of a collapse, its timing, nature and economic consequences (in the aggregate as well as for the individual), it would be bold to assume that the individuals concerned base their decisions on such a scenario: psychological research indicates that even awareness of a threat often does not suffice for behavioral or policy change (e.g., IPCC 2007). Hence, a transformative agenda must seek to generate a majority among voters within the current distributional landscape – a quite formidable task if we look at the potential scope of negatively affected interest groups.

5 Conclusion

In sum, the political economy view is essential for mapping feasible transformation pathways. A politically promising post-growth movement will have to address the looming conflicts of the desired transition as depicted in this paper. This necessitates economic reforms (e.g., working time reduction) as well as compensations (e.g., to low-wage earners or natural resource owners) and strategies to avoid conflicts in the first place (e.g., publishing aggregated results of a new welfare indicator only). In addition, securing political majorities and thus democratic legitimacy in the face of limited public budgets will certainly require popularizing the mostly non-pecuniary benefits of the transition, such as more leisure and better environmental quality.

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