

Karl Aiginger¹

Harnessing competitiveness for social and ecological goals

High road competitiveness is necessary and feasible

In: Chiocchetti, Paolo and Allemand, Frédéric. Competitiveness and Solidarity in the European Union: Interdisciplinary Perspectives. London: Routledge. ISBN 978-1-138-54587-8 Forthcoming 2018.

Abstract

The term competitiveness has been “captured” for too long by lobbyists and politicians in pursuing a low wage strategy. The right-wing populists of today, like the new US administration, have extended this low road agenda by calling for lower environmental ambitions and for a lower social standard. The potential loss of jobs due to “unfair” low cost competitors, but also to inward migration, can mobilize popular support against globalization, even if the trade balance is positive, as it is in the EU. This article argues that countries focusing on innovation, skills and product quality are more successful in the long run. Especially for industrialized countries this is the only strategy to further increase welfare, since low cost countries will enter the market all the time. A high road strategy however needs an alternative framework of concepts and definitions: competitiveness is defined as the ability to deliver outcomes that include social and environmental goals; performance is measured by “Beyond GDP indicators”; and finally a systemic industrial policy has to support innovation and retrain the losers of structural change. In a “high road” approach, competitiveness harnesses societal goals and undermines the roots of populism.

¹ Karl Aiginger Vienna University of Economics and Business, Policy Crossover Center Vienna Europa (www.querdenkereuropa.at, karl.aiginger@querdenkereuropa.at)

The article heavily draws on the research in WWWforEurope, specifically Aiginger (2016), Aiginger–Bärenthaler-Sieber-Vogel (2013), Aiginger-Vogel (2015) and Aiginger-Firgo (2016). Research assistance of Dagmar Guttman and Irene Langer is acknowledged, comments by Susanne Bärenthaler-Sieber, Harald Oberhofer, Michael Peneder, Marcus Scheiblecker, Johanna Vogel and helped to improve earlier versions.

Karl Aiginger²

Harnessing competitiveness for social and ecological goals

High road competitiveness is necessary and feasible

In: Chiocchetti, Paolo and Allemand, Frédéric. Competitiveness and Solidarity in the European Union: Interdisciplinary Perspectives. London: Routledge. ISBN 978-1-138-54587-8 Forthcoming 2018.

1. Introduction and outline

Competitiveness and ambitious social and environmental standards have often been assessed as conflicting goals. If politicians and the media declare that “European competitiveness is challenged” or that “America should bring industry back home”, then politicians are implicitly or explicitly calling for an agenda of low wages, energy costs and social standards. The OECD and the European Commission often summarize this approach under the request for “structural reforms” focusing on deregulation of labour markets.

This article emphasizes that there is, if any, only a short-run trade-off between social and ecological ambitions and economic performance. In the long run, firms and countries going for productivity, innovation, skills and sophisticated markets are more successful than those which primarily focus on the cost side.

The paper highlights that a systemic industrial policy as well as a new definition of competitiveness are necessary to support social and ecological goals. Such a high road approach is necessary and feasible for leading countries if they want to increase well-being. The acknowledgement that each country has to “climb up” the quality ladder if welfare is to increase for all citizens is also important for catching up economies and during periods of disequilibria (such as that experienced by Southern Europe after the Financial Crisis), even if the policy mix and the pressing problems may be different in the short run.

The next section discusses the term competitiveness, how it changed from a “dangerous obsession” (Krugman, 1994) to a welfare-oriented concept. Three chapters follow, which delineate high and low road strategies, discriminate between the old, failing concept of sectoral industrial policy and a new systemic approach. They finally introduce “Beyond GDP goals” as a new performance measure for economies.

² Karl Aiginger Vienna University of Economics and Business, Policy Crossover Center Vienna Europa (www.querdenkereuropa.at, karl.aiginger@querdenkereuropa.at)

The article heavily draws on the research in WWWforEurope, specifically Aiginger (2016), Aiginger–Bärenthaler-Sieber-Vogel (2013), Aiginger-Vogel (2015) and Aiginger-Firgo (2016). Research assistance of Dagmar Guttman and Irene Langer is acknowledged, comments by Susanne Bärenthaler-Sieber, Harald Oberhofer, Michael Peneder, Marcus Scheiblecker, Johanna Vogel and helped to improve earlier versions.

Section 6 empirically compares the competitiveness of Europe and the US according to the new concepts, and whether European countries going for the high road are less successful than economies going for "price competitiveness".

Section 7 tentatively explores the economic background of upcoming populist strategies. The next section analyses the economic strategy announced by the new US administration and the optimal response of Europe, given the empirical findings of this article. Section 9 discusses the merits and shortcomings of the current globalization policy and "responsible globalization" as an alternative; section 10 concludes.

2. From cost competitiveness to outcome and performance

Competitiveness has been defined in many different ways over the past decades. We distinguish four approaches evolving over time

Competitiveness 1.0: price competitiveness – primitive vs. enlightened

The economic debate on the "competitiveness" of nations, regions and firms started with a look at the cost side only (competitiveness 1.0).³ Economists soon added productivity as important sometimes overemphasising labour productivity as the only relevant indicator for competitiveness (see Porter, 1990 and Kohler, 2006). A cost compared to productivity is called a "unit labour cost". We label the costs-only approach as the 'primitive' version and the cost-versus-productivity definition as the 'enlightened' version of price competitiveness in Aiginger et al. (2013). If analysts and politicians claim that "competitiveness is lost" (e.g. in Southern European countries), the focus still lies on the cost side. The mistake to take low productivity as a fact not to be addressed by changes in economic policy or institutions was one of the reasons for the slow recovery of Southern Europe after the financial crisis (Aiginger, 2011). The same holds if lobbyists claim that social costs or environmental taxes are "too high", which is an unhappy generalization reinvented by the new US administration.

Competitiveness 2.0: quality competitiveness as measured by structure, capabilities, ambitions

In the next stage, structural elements and drivers of competitiveness were added. Structural indicators comprised the share of a country in specific sophisticated industries or price segments for production and exports. Drivers of competitiveness are those which come from standard growth theory like innovation and education, or from new growth theory like institutions and clusters. Welfare theory emphasizes that social capital was positive for the performance of firms and economies. Porter (1990) and Stern (2007) argue that sophisticated consumers and first movers provide competitive advantages; the concept of capabilities by Sen (1999) yields additional insight. The factors analyzed in competitiveness 2.0 are very heterogeneous; they are in the middle between input and outcome competitiveness; current or future competitiveness is measured by high shares of sectors in which sophisticated input are used, or by positions in the high end of markets. We summarize these different signals under the term quality competitiveness or competitiveness 2.0 (see also Figure 1).

³ This is reflected in the German expression for competitiveness, "Wettbewerbsfähigkeit" – literally, "the ability to compete".

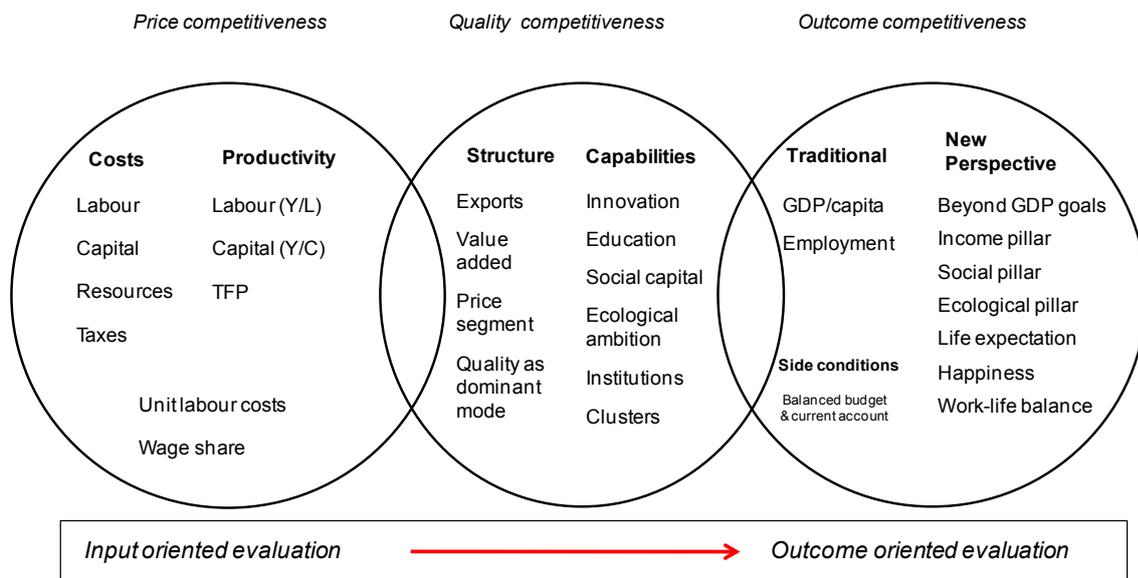
Competitiveness 3.0 and 4.0: outcome competitiveness under old and new perspectives

In the next stage of analysis the outcome of the economies received greater attention. The view that results are more important than inputs led to measuring competitiveness by per capita GDP and employment (understanding these two goals as shortcuts for measuring welfare) during the nineties. More sophisticated analysis distinguished between goals (growth, employment) and side conditions (balanced trade and budgets)⁴. We call this outcome competitiveness under traditional perspectives, or simply competitiveness 3.0.

Today, economics has arrived at the consensus that neither the balancing of trade nor a surplus in the current accounts is a final measure of performance, and that no single indicator like GDP per capita or labour productivity is a sufficient measure of overall performance. Welfare has alternatively been defined by Beyond GDP goals, an approach recommended by Stiglitz, Sen and Fitoussi (2009), and operationalized by Better Life indicators of Sustainable Development Indicators (provided by the OECD, the European Commission and the UN). The ultimate goals of an economy are to enable high and rising incomes, provide employment opportunities, and improve living conditions and ecological sustainability. These goals – weighted by countries differently according to present position and to cultural differences – are presented in the Beyond GDP approach or in comprehensive indicators on well-being, such as life satisfaction, happiness and life expectancy.

Consequently, Aiginger-Bärenthaler-Sieber-Vogel (2013) define the competitiveness of a country or region as the "ability of a country to deliver the Beyond GDP goals for its citizens today and tomorrow". They label this "competitiveness under a new perspective", namely the perspective of a socio-ecological transition. In parallel to the upcoming industry 4.0 (or Internet of Things) we call this approach competitiveness 4.0.

Figure 1: Towards a concept of competitiveness under new perspectives (competitiveness 4.0)



Source: Aiginger, Bärenthaler-Sieber and Vogel (2013). Note: should read "life expectancy" in the right column above

⁴ Trade balances had been seen as measures of competitiveness before, now they are not goals like income or employment, but "side conditions" which only become relevant in the case of disequilibria.

3. The necessity of a “high-road” strategy

The redefinition of competitiveness is not merely an analytical or theoretical detail. It changes the policy conclusion to be derived from the ever-present call for the "competitiveness" of a country. It allows connecting the term competitiveness with the strategy of a country and, specifically, a strategy which is feasible and necessary for industrialised countries. It further gives guidance on how to increase welfare in a globalising world with many new competitors and heterogeneous preferences. With rising incomes basic wants are more and more satisfied and immaterial goods gain importance, such as quality of life, solidarity and ecological sustainability.

To emphasize this change in strategy needed for highly industrialized countries we differentiate between a low road strategy and a high road strategy for countries based on five criteria:

- (i) In a low road strategy countries look for low costs as a driver of competitive advantage, whether it be through low wages, low energy costs and taxes or permissive social and ecological standards. Countries going for the high road boost productivity whether it be through labour productivity or energy and resource efficiency. A high road strategy focuses on quality upgrade to avoid cost competition, and specialize in the high end of markets by product differentiation (smart diversification and smart specialization).
- (ii) Growth drivers on the low road are subsidies, specifically those attracting multinational firms looking for a low wage location. They advocate the preservation of a low wage segment in the labour market by preventing minimum wages and collective agreements. On the high road, in contrast, innovation, education and excellent universities define the growth potential.
- (iii) The ambitions are different. Low road strategies try to limit social standards and set no barriers to hiring and firing and demand-led labour flexibility. High road strategies address social empowerment, skill upgrading and ecological awareness as positive for long run success. Stable employment leads to higher investment of firms and individuals into skills and ecological awareness provides a first-mover advantages (Porter-Van der Linde, 1995). In parallel, we should differentiate between structural policies calling for low cost and high flexibility of labour alone (“structural policy 1.0”) or structural policy “fostering broadly defined investment and labour productivity for inclusive growth (“structural policy 2.0”; Moskovici 2016).
- (iv) Instruments are passive in low road strategies; they comprise import restrictions, devaluation of currencies, shielding from globalisation and migration. High road strategies welcome open markets as drivers of competition, structural change and mobility. Business start-ups and competition are welcomed as enablers of a dynamic discovery process.
- (v) The objective in the low road strategies is to prevent the loss of market shares, to eliminate disequilibria (unemployment, trade deficits) and to pursue rather conventional economic goals (increasing GDP, reducing GDP per capita gaps). The objective of a "high-road strategy" is to deliver rising wellbeing and wider choices, ecological excellence and lower unemployment and income differences.

Relevance to catching up economies and the firm level

It is crucial that high road strategies are not only important for high income countries (even if the necessity to go for highest quality and abilities is more pressing). Even low income countries have to consider the dynamic upgrading of productivity, skills and innovation early on. If they are successful in catching up, the advantage of low wages will diminish and citizens will look for higher incomes as well as quality of goods, thus boosting imports. Very labour-intensive goods face low income elasticity (low dynamics of demand). Therefore, specialization in labour-intensive industries in the lower quality segment and by using imported technology and investment will run into troubles sooner or later (a fact called the “development trap”). Looking ahead towards the products and capabilities needed for medium and high road countries are necessary in the long run perspective of catching up.

Strategic management theory acknowledges implicitly the importance of high road strategies and new concepts of competitiveness. Only in static models of perfect competition, productivity is taken as a given, and competitiveness (or better yet survival) depends on costs not being higher than the industry average; this model supports the concept of price competitiveness and going for a cost cutting strategy in the case of problems. In the dynamic model, with market power and product differentiation, cost or productivity strategies are possible and product differentiation increases profits. They open space for skill upgrading and innovation. Strategic Management Theory posits that each firm has to look for a competitive advantage or even better a "machine" which constantly produces innovations so that the next becomes available if competitors have copied the last one. The final proof that this is not purely theory is given by firms on the stock market, which never tell potential buyers that they have cheap sources of labour or energy, but rather that they possess a “Unique Selling Proposition”; they market their innovation potential and skills so as to fulfil the needs of customers or society in the future. The firms competing for buyers of their shares maintain that they can attract excellent staff and the best management and offer climate-friendly products.

To summarize, a low-road strategy (built on subsidies, tax exemptions, protection, and devaluation of currency) is not feasible for rich countries. The limits of low road strategies should be understood by middle income economies early on. And high road strategies are well in line with firm strategies proposed in the industrial organisation literature to generate long run returns.

Table 1: Low-Road vs. High-Road Strategies

	Low-Road Strategy	High-Road Strategy
Competitive advantage	Low costs (wages, energy, taxes)	Quality, sophisticated products, productivity
Growth drivers	Subsidies, dual labour market, inward FDI	Innovation, education, universities, cluster
Ambitions	Cost advantage, flexible labour	Social empowerment, ecological excellence, trust
Instruments	Import taxes, protectionism, devaluation (external, internal)	Business environment, entrepreneurship, dialogue
Objectives:	Catching up in GDP per capita, employment	Beyond GDP goals, three pillars

4. Essential for the high road: a systemic industrial policy⁵

The industrial policy needed for the high road has to be different from the past approach, which often preserved old structures and favoured big national champions. A new industrial policy should promote competition and be a discovery process generated by a cooperative climate between government and companies (Rodrik, 2004; Aghion, 2011). It should align industrial policy with the long-term interests of the society, thus it has to be systemic (Aiginger, 2012) instead of a stand-alone policy in conflict with other strands of government policy. It should be based on a vision of socio-ecological transition.

Policy documents developed by international organisations, the European Commission and national governments have defined new goals for industrial policy that partially follow the ideas of academia. The OECD's 'New Perspectives Program' (OECD 2014) promotes the inclusion of social and ecological goals into economic models and thinking. The European Commission puts sustainability 'at the centre stage' of industrial policy. Its Energy Roadmap 2050 sets the goal of reducing greenhouse gas emissions by as much as '80 to 95%' ⁶

Yet the new intentions of industrial policy are still on trial. Europe's fear of losing cost competitiveness relative to the U.S. is reducing its determination to put sustainability at the 'centre stage'⁷. Based on Juncker's ten priorities (European Commission 2014), the priority relevant to climate and energy reads "making energy more secure, affordable and sustainable". This is the complete opposite to setting a basic priority and putting sustainability at the top of a new agenda. Ecological issues are also lacking in Juncker's new "White Paper" (European Commission 2017). ⁸

An unresolved problem in devising a sustainable industrial policy is that new energy sources are "intermittent" and require complementary fossil fuels and investment in the power-grid infrastructure. Coal use in Europe increased after the collapse of the European emissions trading scheme. This led to coal substituting gas as "reserve capacity" during the time renewable energy is not available. Increased U.S. coal exports meant that coal was still cheaper in Europe than gas, and total emissions rise, even though the share of renewables increased ("green paradoxon")

The policy of the new US administration will bring the next and an even larger threat for a systemic industrial policy in Europe. Oil and gas lobbies have already started to persuade the European Commission to follow the US; countries with large supplies of coal will prevent a consistent sustainability strategy and call for an old industrial policy favouring capital-and-energy-intensive large firms. And Russia will provide financial and social media support for populist parties denying the climate problem and promoting fossil fuels.

⁵ This section closely follows Aiginger (2015).

⁶ Radical innovation projects – e.g. on ultra-low carbon steel – have been started and proved feasible but no existing firm intends to promote a pilot plant.

⁷ Recently, the European Commission set the goal to increase manufacturing's share of nominal value-added GDP to 20% by 2020 (from currently 16%), which is only realistic if quality of production is significantly upgraded and service components are added (see Peneder 2014). The goal is set without any reference to ecological goals or sustainability

⁸ On the positive side, we can mention that the share of renewable energy has strongly increased, with some countries producing 50% of electric energy from 'green' sources. And China is undertaking a deep transformation, boosting resource and energy efficiency – albeit from a very low initial level. It has set goals to increase R&D investment to 2% of GDP (the current EU share) and is making advances in electric vehicles and alternative energies.

To summarize, a new systemic industrial policy should support the transition of traditional manufacturing to a sector producing greater consumer value, higher energy and resource efficiency, while supporting the economy's long-term goals. We therefore define an industrial policy for high-wage countries as a "strategy to promote high-road competitiveness", where competitiveness has been defined in section 4 as the ability of an economy to deliver "Beyond GDP goals".

5. A two-stage strategy with a new benchmark of success⁹

High road competitiveness requires time and resources. It is best compatible with a two-stage strategy towards transition. Reducing public debt, unemployment and underemployment under the current trend of labour-saving technological progress will require economic growth as to boost employment and to provide resources for change. This holds also for rich industrialized countries, over the next one or two decades. It would even be better if the growth rate were higher than in the years after 2000, if Europe plans to reduce inequality and allow a minimum of inward migration from countries with political unrest and ecological problems, such as Afghanistan, Syria, Libya or Egypt, or Sub-Sahara-Africa. In this "first stage", investment will be high, and should be supported by an active systemic industrial policy.

On the other hand, it is essential to reduce the "growth imperative", which is defined as the necessity of economies to grow as to reach other goals than GDP growth. This should not be done by reducing the overall rate of technical progress (total factor productivity) , but by redirecting it from labour saving to energy saving. Furthermore, people who work longer than they prefer, or would like sabbaticals for education or other personal preferences, should be encouraged to partially or temporarily retreat from the labour market. The same holds if they wish to have more leisure, even at the cost of lower income. People should be encouraged to migrate from regions with oversupply to those with shortages.

In ten or twenty years, the growth trend of industrial countries will be lower for supply or demand reasons ("the new mediocre", see IMF 2015)¹⁰ and people could enjoy this if some important changes were implemented. To make this probable, the benchmark of success for economies has to be changed now.

A new performance measure is needed

To guarantee that the first phase will not be business as usual and countries will not have the same "growth imperative" in the future, it is important to change the benchmark of success. As the new performance measure we propose "high well-being in a sustainable environment". Thus, GDP and GDP growth is substituted by high and increasing well-being. This is in line with the "Beyond GDP" approach (Stiglitz et al., 2009), as underpinned by the broad economic literature.

⁹ See also appendix 1

¹⁰ While most projections predict rather low long term growth for industrialized countries, some stress demand reasons (declining marginal utility of income), others the deceleration of technological progress ("all essential innovations are available now"). The debate about industry 4.0 on the other extreme predict high labor saving technological progress, again with the two possibilities that this decrease labor input in total, or that product specific labor productivity increases stimulate output and provide rather stable employment. For the debate between "secular stagnation" and "industry 4.0" see Gordon 2014, Summers 2014, Breynjolfsson et al 2012)

The notion of "well-being" calls for the simultaneous accomplishment of three strategic goals: economic dynamics, social inclusiveness and environmental sustainability. Economic dynamics implies that an ever-increasing number of people benefit from the attainment of a broad set of economic achievements. Social inclusiveness implies that unemployment as well as income differences will decrease. Life chances, education and capabilities are distributed more equitably; spreads in income and wealth are based on merit, limited to levels determined by democratically based political decisions. Environmental sustainability demands that planetary boundaries be respected. Technological, behavioural and institutional changes lead to an absolute reduction of emissions and resource use. This gives poorer countries scope for economic development and poverty reduction and allows the next generation to make choices.

6. Empirical assessment of Competitiveness: EU vs. US

The concept "competitiveness as the ability to deliver Beyond GDP goals" (competitiveness 4.0) will now be used to assess the deficits and strengths of Europe relative to the US, and then to compare European countries relative to each other (Aiginger–Bärenthaler–Sieber–Vogel, 2013 and Aiginger-Vogel, 2015).¹¹

Comparison between EU and US

Competitiveness 1.0

Both wages and productivity in the EU-28 are, on average, about one third lower than those in the US, so that overall unit labour costs are similar. The productivity lead of the US is smaller for the total economy, but larger for manufacturing.

Competitiveness 2.0

Regarding technology-driven and skill-intensive exports, Europe no longer trails the US; instead, Europe enjoys trade surpluses in all sophisticated sectors, while the US has trade deficits. Europe has a far larger export share in eco-industries and renewables.

However, Europe lags behind the US in R&D expenditures and higher education. On the other hand, Europe invests more in early education, vocational training and active labour market policies. As far as institutions are concerned, Europe has stricter rules for labour and business, lower regulatory quality, and a Rule of Law that is generally considered less stringent than in the US (tough goals, but fewer adherences to legislated objectives). On the other hand, the quality of the parliamentary system is better in Europe. Environmental ambition is more pronounced, as shown in higher environmental taxes, more recycling, a higher share of environment-related technology patents and a high share of organic farming.

We conclude that Europe lags behind the US in most capability groups and specifically in R&D and higher education – the two of the most important indicators for frontier countries. However, Europe leads in indicators that are important for the transition to a more socially inclusive and ecologically sustainable economy.

Competitiveness 3.0

¹¹ Data available in this paper mainly up to 2010, but this differ across indicators.

The traditional outcome indicators put the US in the lead: per capita GDP (less in GDP per hour) and unemployment is lower than in Europe. The employment rate, however, is lower in the US and declining in sharp contrast to Europe. Here, it is increasing, boosted by increasing part-time work. Large public deficits and debts, as well as a negative current-account balance in the US present limitations to the success of the US in traditional outcome competitiveness.

Competitiveness 4.0

For Beyond GDP goals the picture is different. The US still leads in the income pillar. As for the social pillar, the US trails in poverty prevention and equality, but has lower youth and long-term unemployment, thus yielding mixed overall results. The US clearly lags behind Europe in the ecological pillar with the exception that rules are adhered to more closely if legislated (e.g. NOx emission in diesel driven cars).

Regarding comprehensive indicators, Europe does better in life expectancy, which is probably the best objective quantitative indicator. Self-reported life satisfaction, work-life balance and happiness – all subjective indicators - are higher in the US.

Intra-European results

As far as individual countries are concerned, Denmark, Sweden and Finland excel in capabilities, specifically in education and R&D expenditures. Germany and France receive a top position in innovation and social investment, but a less favourable one in education and institutions.

Cost positions (price competitiveness 1.0) do not really determine performance, which is a warning to all analyses that overemphasise low costs as a strategy for medium and high-income countries. The assessment is different for Southern European countries whose labour cost increases were higher than productivity in the years before the crisis, leading to severe problems in current accounts but also in public finance (Aiginger, 2015). The results for Greece, Italy, Romania and Bulgaria furthermore show that outcomes could considerably improve if trust in governance and institutions improved. If the role of upgrading productivity and governance had received more emphasis in the European reform programs for the crisis countries from the beginning, the output and employment loss could have been smaller and opposition to European solutions as well as the increase in poverty could have been prevented.

Using the definition of competitiveness as the ability of a region or country to deliver Beyond GDP goals should be a way to stop the critique that the term competitiveness (Krugman, 1994) is dangerous and misleading, as well as the critique that competitiveness is a concept only applicable at the firm level. Competitiveness 4.0 is now closely linked to the economic performance of a region and allows analysing how rich countries can successfully pursue a high-road strategy.

The empirical results show that countries going for a high road, such as the northern European countries (but also Switzerland), can successfully compete by means of sophisticated capabilities. Social and ecological ambitions are not a burden, but can feed long run success. Countries going for competitiveness 1.0 and specifically its primitive version of cost cutting do not perform well in the long run. Success can and should be measured by broader indicators (Beyond GDP goals) instead of narrow economic ones, advocating the definition of competitiveness under new perspectives (competitiveness 4.0).

7. Populist movements in light of competitiveness 4.0

Populist movements are on rise in Europe and in the USA, pushing national goals up on the agenda by demanding "our country first" and a return to the past glory of the nation. A renationalization of policy and closing of borders to people and goods are recommended. Populism exaggerates and frames the existing problems of the economy and society, in an effort to support ever more simplistic and drastic policy solutions. It accuses the mainstream politics, but also experts and the media to support the elites and maybe also clandestinely migrants and foreigners. They declare common people ("us", "the 99 %", "the mainstreet") to be exploited by the privileged elite. Some authors distinguish between a right wing populism which glorifies the past and divides society and left wing strands designing utopian ideas for a better society, freedom from serfdom and imperialism calling for emancipation. Such a utopia might be a society without class divide and with self-determination, leisure and the capability to live a good life. There is an individualistic direction expecting a thousand flowers to bloom (new left of the 68 movement) and an orthodox one calling for big brother to solve all problems through an ever larger public sector, nationalization of enterprises and higher tax rates.

Real problems, wrong conclusions

Populism feeds on real, existing problems. The driving force of today's populism is the unholy trinity of unemployment, inequality and inward migration.

Unemployment is in the double digits in many European countries, higher than before the financial crisis. Long-term unemployment is spreading for less skilled former factory workers and for young people without job experience. Employment in manufacturing is decreasing in all industrialized countries. Its share is now less than 10% of total employment in many of them. The loss is compensated – in most countries overcompensated – by an increase in jobs in the service sector. However, these jobs require different qualifications, are sometimes paid less well and often only part time. If factory workers lose their jobs due to the relocation of firms they often find it very difficult to get a new one in the same region ("rust belts"). And even those who have not lost their job or income feel that this might be the case soon. Earnings are expected to decrease and unemployment spells are becoming longer and more frequent. Most studies blame technological change for the job loss of low skilled workers, and some blame globalization. Independently of the deeper cause, it is evident that economic policy did not do enough to compensate or – even better – requalify the losers of structural change. The upcoming problem of lower employment for less skilled workers in industrialized countries was well predicted by economic theory.

Inequality is on the rise within practically all industrialized countries; median wages have been stagnating or falling in the US over decades. Specifically, the income share of the top 1% is exploding, along with incomes in the financial sector and top management. Inward migration, which tended to be welcomed in the ageing society and fueled by the integration of former socialist countries in the EU, is now viewed with more skepticism, since migrants tend to increase labour supply in the low skilled sector where there is already high unemployment. That inward migration even of unskilled workers is, however, necessary to fill jobs for housing, nursing and tourism is considered less relevant.

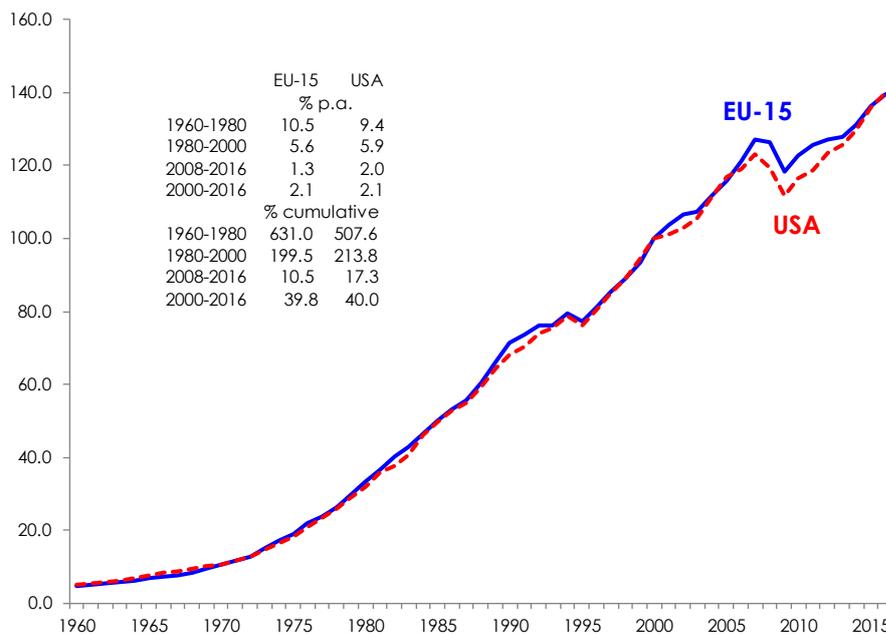
As policy conclusions, populists advocate closing borders to migrants as well as goods. They favor import tariffs on goods produced in low income countries, the exit from the EU and the recalling of

trade agreements. Stopping globalization and even re-erecting fences to neighboring countries is part of the policy agenda.

Facts about well-being and competitiveness 4.0

If we look at the broad indicators for a better life and for competitiveness 4.0 (not all reported here), we see that unemployment, inequality and migration are rising. But the general picture for well-being is not so bleak.

Figure 2: GDP per capita in Europe and the USA



S: Eurostat (AMECO May 2016).

GDP per capita in real terms is now three or four times higher than in the 1980s and has increased by 40% since 2000 in the EU as well as in the US. The GDP surpassed the pre-crisis output in Europe in 2016, and is currently 10 % higher than at the start of the crisis in the US. Growth rates are decelerating for industrialized countries over time, which opens up a discussion on whether this is demand-led (people giving increased income a lower preference) or supply led (secular stagnation, rise of the market shares of low income countries). Inflation is rather low; specifically, several consumer goods bought by low income people have become absolutely cheaper.

Employment is higher in Europe than before the crisis, but employment rates decreased in the US. For unemployment the opposite occurred: it increased in Europe (up to 2016) and decreased in the US towards rates normally considered “full employment”.

Though inequality (relative incomes of rich vs. poor) is increasing in most countries, absolute poverty is decreasing. Life expectancy – perhaps the most comprehensive and objective indicator of well-being – is increasing by about three month per year a person is born later. Life satisfaction is persistently high.

Social standards have not been reduced, but strains in the financing of pensions call for longer work and lower replacement rates. Ecological standards are rising, however, not nearly as fast as

necessary to combat climate change. Emissions and resource use is increasing in absolute terms, however, it is falling relative to economic activity (relative decoupling). Signs of absolute decoupling are rare.

Open economies with high import and export shares, if anything, tend to grow more rapidly than closed economies, and even more so if they upgrade social and ecological ambitions,¹²

Populism therefore has some basis in reality, insofar as incomes are not rising as quickly as in the past, and problems of inequality and losses of low skilled jobs exist¹³. Under conditions of insecurity, inter alia fueled by the financial crisis, and a migration wave fueled by political instability in the home country (instead of demand in the country of destination), the fear arises that life incomes will not be higher in this generation than in the past. For some low skilled workers more problems have come up ("Abstiegsangst"); they fear becoming unemployed and dependent on social payments. In the long run, incomes and employment are higher. Part time employment is to a large extent voluntary, social nets exist, and poverty is lower. Life expectancy is rising, as well as healthy years of living. In general, recalling the glory of the past or the glory of a time in which countries were closed to goods, services and people is thus absolutely not supported by better-life indicators or competitiveness 4.0. The problem that this does not hold for all subgroups, regions and losers of structural change should be a priority of economic policy.

A digression: de-growth vs. right wing populism

Entirely different from right wing populism is the focus of the De-Growth Community. It spread quickly, specifically in academic circles and among NGOs, and is to some extent concentrated in cities and sub-groups with comfortable family incomes and property. At the top of the agenda is that continued income growth is neither possible (due to limits of the planet) nor desirable. Better life could be achieved through lower incomes than today. Formal work can be substituted by informal work, community relations and empathy for others (Jackson 2009, Paech 2012,). To some extent, de-growth is the antithesis to right wing populism, which emphasizes formal jobs, above all in manufacturing. Right wing populism is strongest among people striving for higher incomes and material consumption, even if this requires strenuous and dirty blue collar jobs.

Right wing populists give absolutely no priority to green goals, energy efficiency and alternative energy. Climate change is considered exaggerated, at best, or even declared an invention of the Chinese to endanger US competitiveness, as Donald Trump claims.

As far as migration is concerned, populists would like to stop it, while the de-growth movement welcomes an open and heterogeneous society. That openness – specifically for inward migration – is not only an economic problem in a stagnating or shrinking economy, but also a political issue favoring populism and xenophobia is not addressed in the De-Growth Community.

8. Industrial renaissance in the US and the best answer of Europe

Low road policies in a high-tech country

¹² Immigration was highly welcomed, specifically in the UK, and helped solve labour shortages created by an ageing society.

¹³ For irrational routes of the debate see also Haidt (2012).

“Remaking manufacturing in the U.S.” had arrived on the agenda in the US before Trump, initiated by the high deficit in the trade balance and a dramatic loss of shares in output and employment. The share of manufacturing is now lower in the US than in Europe¹⁴. The deeper reasons for the decline of U.S. manufacturing are the lack of cooperation across U.S. companies and their loss of learning capacity due to early offshoring (Berger, 2013). However, policy proposals tend to start with cost issues.

The first hope was that the 'renaissance of manufacturing' could build on cheap energy prices due to offshore drilling, then to shale gas resources or low cost oil transported from Alaska via new pipelines. And indeed, the new energy sources, especially liquefied gas and gas extracted via fracking have caused U.S. energy prices to plummet; manufacturing output increased in the US to a somewhat greater extent than in Europe. However, the recovery was concentrated in energy-intensive sectors, while the trade deficit in technology-intensive industries remained high. And when the profitability of high cost exploitation broke down - with the world wide decline of oil and gas prices - the hope for revitalization of US manufacturing, specifically in the “rust belt”, faded away. Not having addressed the deeper problems fueled the populism.

In reaction to this backlash in rebuilding manufacturing via low energy prices, Donald Trump found three culprits for the ongoing problems for US manufacturing: imports from China, ecological as well as social "over regulations". Trump's assessment is in line with the primitive version of competitiveness 1.0, in which costs decide on outcomes. Consequently, his policy prescription also follows the concept of a low road strategy (reduce wages and social standards) mixed with the old industrial policy approach of protecting against imports (via tariffs), and micro interventions. This means to influence the investment decisions of individual large firms (by bribing, persuading and subsidizing). Giving permits for new oil pipelines should reduce energy costs, and more specifically the costs of fossil energy.¹⁵

Trade agreements with Asian partners will be cancelled; NAFTA should be redrawn at least. High tariffs are announced for imports, taxes for firms which invest abroad, and financial gifts to firms staying home. Energy prices should decrease by extending drilling and pipelines for fossil energy, while social standards including Obamacare are to be abandoned or at least made cheaper. Environmental standards as well as the regulation of financial markets will be lowered.

With this strategy, high-tech firms will be negatively affected, since they need qualified inward migration. Firms investing in energy efficiency, alternative energy production, new power engine and construction models will enter later since prices for fossil energy remain low. If we relate Trumps' policy to the term competitiveness, he clearly has the view of competitiveness 1.0 combined with an old micro-interfering industrial policy. Increasing competitiveness by fostering innovation and skills or ecological ambitions is absent in the program of the new administration.

¹⁴ Jeff Immelt (General Electric CEO) declared “outsourcing as the most outdated model”, US politicians praised Lenovo for restarting computer production in North Carolina and General Electric for returning washing machine manufacture to Kentucky.

¹⁵ Low road features can also be seen in the UK when tariffs for steel are called for, or when it is deplored if low skilled production leaves. The share of manufacturing in the UK and France has fallen to less than 10%, one reason for this is brain drain into the service sector in the UK and to the military or government sector in France.

Table 2: European and U.S. sector balances and export shares

	EU				US			
	1999	2011	1999	2011	1999	2011	1999	2011
	Trade in bn €		Shares of exports		Trade in bn €		Shares of exports	
Energy intensive industries								
Exports	77.7	247.4	11.3	15.5	57.3	123.1	9.7	16.0
Imports	64.1	216.9	9.3	13.6	79.0	106.0	13.3	13.8
Trade balance	13.6	30.5	2.0	1.9	-21.7	17.1	-3.7	2.2
Technology driven industries								
Exports	252.1	530.9	36.6	33.2	280.0	246.3	47.2	32.0
Imports	250.1	436.8	36.3	27.3	371.1	424.3	62.5	55.1
Trade balance	2.1	94.1	0.3	5.9	-91.1	-178.0	-15.3	-23.1
Resource intensive industries								
Exports	76.1	192.2	11.1	12.0	50.2	76.0	8.5	9.9
Imports	72.0	198.1	10.5	12.4	121.6	116.2	20.5	15.1
Trade balance	4.1	-5.8	0.6	-0.4	-71.4	-40.1	-12.0	-5.2
Engineering industries								
Exports	365.1	767.8	53.1	48.1	379.7	367.9	64.0	47.7
Imports	328.5	580.8	47.7	36.3	490.7	576.3	82.7	74.8
Trade balance	36.6	187.0	5.3	11.7	-111.0	-208.5	-18.7	-27.1

S: Eurostat (AMECO), WIFO database.

The response of Europe, as recommended by competitiveness 4.0

In principle, European policy has two options in answering the low road and high intervention approach for industrial renaissance: to either imitate the new policy (perhaps a bit later, more moderately and differently across countries) or to develop a different strategy built on European strengths and capabilities.

The differences can be highlighted by the following points:

- Lower energy prices, specifically for fossil energy, can be answered by higher energy efficiency and a technology lead of Europe in renewables, a decarbonized infrastructure and new power systems.
- Lower social standards can be answered by improving skills and the equality of opportunities. Shifting from ex post protection to the so-called social investment approach (Leoni 2015) would reduce the probability of becoming unemployed. Symmetric labour flexibility, which allows firms to change working hours with demand in exchange for the right of workers to change the weekly working time according to preferences changing due to the work life balance, could lower costs for firms as well as provide higher well-being for employees.
- The import restrictions can be answered by upgrading skills and innovation, switching more quickly to new products and services, fulfilling the needs of individuals and society.
- The “America first policy” can be answered by closer cooperation of Europe with fast-growing economies and by investment in eastern and southern neighbor countries. Such neighborhood programs could mimic the US European Recovery Program, which boosted investment in Europe and created a large and fast-growing market for the US. The cultural and educational exchange could be intensified by Fulbright or Schumpeter stipendiums.
- Lower corporate taxes for firms investing in the US, can be answered by closing loopholes for US companies using tax shelters in individual European countries and tax shifting from Europe into the US.

This high road policy response is not always easy; it requires cooperation between countries, it takes time and some of the concepts have still to be developed. However, a high road policy is sustainable in the sense that it prepares Europe for tomorrow and builds on activities which foster long run competitiveness for countries with high incomes faced by competition from low cost countries. It provides capabilities for tomorrow instead of short run protection and allows people to increase well-being and chances for long run jobs, without getting dependent on idiosyncratic decisions of a government or financial support.

Confidence that the high road approach works comes from the past performance of Europe, in that it has no current account deficit (in contrast to the US) and that those European economies which did go for a broader set of goals and for capabilities as drivers of growth and competitiveness (like the Scandinavian countries, Switzerland and Austria). These countries did not run into economic difficulties, but became leaders in GDP per capita and Beyond GDP indicators. Many of these countries enjoy positive trade and investment balances. They prove that competitiveness 4.0 and a strategy of social ecological transition is viable, even in an open and globalizing world.

9. Reshaping globalization

One feature of populist policy in Europe and the US is its opposition to globalization. However, the critique of globalization, its speed and its current characteristics is by far not restricted to populists. In this chapter we argue that globalization is in general positive, but has to be monitored by economic policy, which has to a large extent not been the case. And the use of new definitions for competitiveness and industrial policy would boost the advantages of globalization. It also could limit the losses for low skilled workers in industrialized countries.

Most predictions have proved correct

Economic theory stresses the advantages of trade. It enables the deeper specialization of countries and a better use of abundant resources in both the "North" and the "South". However, theory has also predicted that there will be winners and losers. In the North, the winners will be capital and skilled labour, and the losers will be the unskilled, whose labour is substituted by imports from the South. Since overall gains are larger than losses, the losers can – theoretically – be fully compensated. In the South, low-skilled labour will be utilized more intensively, and capital invested in sheltered, domestic-oriented industries is expected to lose. As technology disseminates, lower income countries are expected to grow at a faster rate than rich countries.

During the wave of hyper globalization from the start of the 1990s to the Financial Crisis output boomed, with average growth rates higher than 3% (implying a doubling of output in 25 years). Growth was even higher in developing countries, so that income inequality *across* countries declined.

In the North, multinational firms and profits boomed, while wage rates declined. Income inequality *within* countries increased. At the same time, wages, in particular those of low-skilled workers, remained fairly constant (in Europe) or declined (in the US). Unemployment rose in the low-skilled segment. In the South, absolute poverty and child fatalities plummeted at a faster rate than even UN "millennium goals". Somewhat unexpectedly, however, income inequality within developing

countries also rose, as a split occurred between workers able to cooperate with multinational firms and migrants from rural areas which could not.

The mood is turning against globalization

Despite the overall beneficial results for the North as well as the South, opposition to globalization has increased. Anti-globalization movements and populist parties are booming even in relatively prosperous European countries (Netherlands, Belgium and Austria), which had strongly profited from openness, integration and globalization. The Brexit and the US presidential elections have underlined the power of anti-globalization sentiments.

Economic policy has ignored the losers. They have neither been compensated for their losses nor provided with the capacity to take advantage of structural change. Instead, policy has often supported the winners by offering tax loopholes. Unemployment resulting from globalization has been amplified by a technological shift substituting low skilled work and calling for higher qualifications. Unemployment has increased, also due to lower growth in the aftermath of the Financial Crisis and due to migration driven by political and ecological problems in home countries. These four interacting causes for low-skilled unemployment can only be resolved through a similarly joint reaction of fiscal, industrial and labour policy, including a policy to reduce income differences. Silo strategies which emphasize goals separately will not work, if unemployment originates from the interaction of four causes (Aiginger 2017A).

Policy change is needed towards "responsible globalization"

Globalization will be hard to continue if policies do not change. A new policy for responsible globalization will need the following elements:

- Economic policy retrains the losers proactively and early by skill upgrading, so as to be able to switch into new jobs and industries.
- External costs, above all environmental damages, have to be internalized by pricing emissions and transportation costs. Social standards will be monitored in international agreements; they cannot be challenged by court decisions.
- Multinational firms have to use clean technologies developed for domestic plants for all investments abroad, country to country reporting of emissions for plants at the headquarter versus those in the subsidiary could be the starting step on this ambitious path.
- Technical progress will be redirected from labour saving to resource and energy saving through price changes, technology programs and tax policy.
- Financial transactions will be taxed, so as to reduce the need for extreme dividends in the real economy. The revenues will be used to reduce taxes on labour and small corporations.
- Labour market policy changes will be introduced, switching from paying primarily for unemployment if it occurs to preventing it ex ante through a social investment and activation policy.

All these changes can be supported with changes in the policy concepts. Performance should not be measured by GDP but by Beyond GDP policy, industrial policy has to become systemic and integrate policy strands, and competitiveness should not be understood as price competitiveness, but by assessing outcomes under the new social ecological perspectives (competitiveness 4.0).

10. Summary

Definitions can shape policies. Defining competitiveness in the narrow sense of price competition calls for reducing wages and non-wage costs. This is a dangerous policy advice for medium or high income countries, because in the long run this further reduces incomes. In the short run unemployment might temporarily decrease, as argued by both business-driven and populist parties. Even mainstream politicians, quality newspapers, the European Commission and the OECD often use this narrow approach. Competitiveness 1.0, as we call it, comes in a primitive version, in which costs are the only important component, and an enlightened one, in which costs are compared to productivity. Unit labour costs are still independent of product quality and do not inform about the drivers of competitiveness or the social and ecological standards achieved. Innovation and skills, abilities and structures are part of an assessment according to competitiveness 2.0.

Defining competitiveness by outcomes changes the perspective. Measuring competitiveness by rather traditional indicators like GDP, employment and external balances (competitiveness 3.0) started in the nineties in documents of the European Commission, the OECD and the US Congress. The consensus that the performance of an economy or society should not be measured by narrow economic goals but rather broader societal goals led to the proposal to define competitiveness as “the ability of regions to deliver Beyond GDP goals” (competitiveness 4.0).

However, changing definitions alone does not suffice, given the political and societal problems in the globalizing world and in the aftermath of the Financial Crisis. A decade will soon have passed since the crisis started due to excessive speculation in the financial sector. Economic dynamics are still low in Europe, and pre-crisis output was reached in 2016. Unemployment and inequality has increased, and public debt has hit a limit – despite an interest burden lowered by an extremely expansive monetary policy.

In the long run we know that economic growth will be lower for industrialized countries than in the past, and that this need not be a problem if incentives and behavior changes. However, in the short run, Europe and the US require growth to eliminate inherited disequilibria, and reduce inequality, debt and unemployment. This suggests a two-stage approach, with higher growth in the first stage but accepting and enjoying lower growth in the second (due to decreasing marginal utility of incomes and/or lower technical progress). But in the first stage incentives and behavior have to change so as to reduce the “growth imperative”. Technical progress has to be redirected from labour saving to resource saving, labour has to become more flexible, not dictated by demand fluctuation but by the desire of citizens to reduce working time, if the work life balance suggests or the financial situation allows. Taxes have to be shifted from labour to emissions, alcohol, tobacco and inheritances. This transition should not be dictated by a top-down policy but supported by a two-tier policy in which (i) governments and international organizations take the lead in setting framework conditions (preventing tax evasion, stopping subsidies for fossil energy) and (ii) then countries and regions decide how to do this following national preferences, giving bottom-up initiatives and individuals more leeway than today (Aiginger, 2017).

Globalization has tremendously improved welfare. It has reduced poverty and early child death more quickly than UN millennium goals envisaged. But it has also produced losers, as predicted by theory. In industrialized countries the low skilled workers – often blue collar workers in manufacturing – lost

their jobs. The mood has turned against globalization, and political movements and parties that support closing borders and erecting walls against goods and people are on the rise. Neither international organizations nor trade and investment agreements had the objective to raise social standards or to limit climate change. Ships, air traffic and road transport are heavily undertaxed. “Responsible globalization” that respects and develops standards and incorporates societal goals is needed. A new systemic industrial policy should not single out some large firms or national champions for micro-interventions, persuasion or bribing, but rather empower firms and individuals to shift into new industries or segments that deliver consumer value and societal goals.

References

- Aghion, Ph., Boulanger, J., Cohen, E., Rethinking Industrial Policy, Bruegel Policy Brief, 04/2011.
- Aiginger, K., Vogel J. (2015), "Competitiveness Review", An International Business Journal, 25(5), pp. 497-523.
- Aiginger, K. (2006), "Competitiveness: From a Dangerous Obsession to a Welfare Creating Ability with Positive Externalities", Special Issue on Competitiveness, Journal of Industry, Competition and Trade, 6(2), pp. 161-177.
- Aiginger, K. (2011), "Why growth performance differed across countries in the recent crisis: the impact of pre-crisis conditions", Review of Economics and Finance, 1(4), pp. 35-52.
- Aiginger, K. (2011), The inefficiency of Industrial and Innovation Policy in France, VOX, 3. October 2011.
<http://www.voxeu.org/article/inefficiency-industrial-and-innovation-policy-france>
- Aiginger, K., "Industrial Policy for a Sustainable Growth Path", in: D. Bailey, K. Cowling, P. Tomlinson: New Perspectives on Industrial Policy, Oxford, Oxford University Press, 2. April 2015, pp. 365-394. **Industrialpolicy_Buch_15052014**
- Aiginger, K., "New Dynamics for Europe: Reaping the Benefits of Socio-ecological Transition", Vienna, Brussels 2016 (<http://Synthesis-Report-Part-I.foreurope.eu>).
- Aiginger, K., A Systemic Industrial Policy to Pave a New Growth Path for Europe, WIFO Working Paper, 421/2012.
- Aiginger, K., How a strong Europe could create more national scope of action, Policy crossover flash 1/2017, www.querdenkereuropa.at
- Aiginger, K., Political Rebound Effects as Stumbling Blocks for Socio-Ecological Transition. Forthcoming in: American Journal of Business, Economics and Management, 2017
- Aiginger, K., Bärenthaler-Sieber, S., Vogel, J., Competitiveness under New Perspectives, WWWWorking Paper no 44, October 2013.
- Aiginger, K., Firgo, M., Regional Competitiveness, , in: Huggins, R., Thomson P. (Eds), Handbook of Regions and Competitiveness, 2016.
- Aiginger, K., Firgo, M., Huber, P., Policy options for the development of peripheral regions and countries of Europe, WWWforEurope Policy Brief, Issue 2, December 2012.
- Aiginger, K., Firgo, M., Huber, P., "What Can the EMU's Peripheral Countries Learn from Regional Growth?" in Lacina, L., Rozmahel, P., Rusek, A. (eds.), Political Economy of Eurozone Crisis. Reforms and Their Limits, Mendel European Centre, Czech Republic, 2013.
- Aiginger, K., Europe must learn from the Greece negotiations, EurActiv, 24 July 2015
<http://www.euractiv.com/sections/euro-finance/europe-must-learn%20from%20the-greece-negotiations-316561>
- Aiginger, K., "A two stage strategy for restarting growth", OeNB, 43rd Economics Conference 2015, Long-term perspectives for economic growth, pp. 30-40.
- Aiginger, K., Bayer, K., A new start for Greece and Europe! ÖGfE Policy Brief 25'2015, Vienna, 17 July 2015, ISSN 2305-263
- Aiginger, K., Guger, A., The European Socio-Economic Model. In Giddens, A., Diamond, P., Liddle, R. (eds.), Global Europe, Social Europe, Polity Press, Cambridge, United Kingdom, 2006, pp. 124-150

- Aiginger, K., Sieber, S., 'The Matrix Approach to Industrial Policy', *International Review of Applied Economics*, Vol. 20, No.5, December 2006, pp. 573-603.
- Arrow, K., Knowledge, Belief and the Economic System, *WIFO-Monatsberichte* 12/2013, pp. 943-951.
- Berger, S. (2013), *Making in America, From Innovation to Market*, *The MIT Press*, August 2013.
- Breynefjolfsson, E., Mc Affee A., *A Race against the machine. How the digital Revolution is Accelerating Innovation*. Digital Frontier Press, Lexington, MA, 2012.
- European Commission (2014): Presidents Juncker`s Ten Priorities, https://ec.europa/commission/priorities_en
- European Commission (2017): White Paper on the Future of Europe, COM(2017)2025. March 2017, Brussels, 2017
- Fagerberg, J. (1988), "International Competitiveness", *Economic Journal*, 98(391), pp. 355-374.
- Fischer-Kowalski, M., Hausknost, D., *Large scale societal transitions in the past*, *WWWforEurope Working Paper Issue 55*, March 2014.
- Giddens, A. (1998), *The Third Way: The Renewal of Social Democracy*, Polity Press, Cambridge.
- Gordon, R. J. , *The Demise of U.S. Economic Growth, Restatement, Rebuttal and Reflections*, NBER Working Paper 2014.
- Haidt, J., *The Righteous Mind, Why Good People Are Divided by Politics and Religion*, Pantheon Books, 2012
- Hemerijck, A. (2012), "Retrenchment, redistribution, capacitating welfare provision, and institutional coherence after the Eurozone's austerity reflex", *Sociologica*, 1, doi: 10.2383/36893.
- Hözl, W., Reinstaller, A. (2011), "On the heterogeneity of sectoral growth and structural dynamics: Evidence from Austrian manufacturing industries", *Applied Economics*, 43(20), pp. 2565-2582.
- IMF, "Prevent "New Mediocre" From Becoming "New Reality" , *Survey*, Washington 2015
- Jackson, T , *Prosperity without growth. Economics for the finite planet*, Earthscan 2009
- Janger, J., Hözl, W., Kaniovski, S., Kutsam, J., Peneder, M., Reinstaller, A., Sieber, S., Stadler, I., Unterlass, F. (2011), "Structural Change and the Competitiveness of EU Member States", *WIFO*, Vienna.
- Journal of Industry, Competition and Trade*, Special Issue on Competitiveness, Volume 6, Number 2, June 2006.
- Journal of Industry, Competition and Trade*, Special Issue on the Future of Industrial Policy, Volume 7, Number 314, December 2007.
- Ketels, Ch.H.M. (2006), "Michael Porter's competitiveness framework – recent learnings and new research priorities", *Journal of Industry, Competition and Trade*, Vol. 6(2), pp. 115-136.
- Ketels, Ch.H.M., Protsiv, S. (2013), "Clusters and the New Growth Path for Europe", *WWWforEurope Working Paper No. 14*.
- Kohler, W. (2006), "The 'Lisbon Goal' of the EU: Rhetoric or Substance?" *Journal of Industry, Competition and Trade*, Vol. 6(2), pp. 85-103.
- Krugman, P. (1994), "Competitiveness: A Dangerous Obsession", *Foreign Affairs* 73(2), pp. 28-44.
- Krugman, P. (1996), "Making Sense of the Competitiveness Debate", *Oxford Review of Economic Policy*, 12(3), pp. 17-25.
- LeoniT., *Welfare State Adjustments to new Social Goals, A review focussing on the Social Investment Approach*, *WWWforEurope Working Paper 89*, 2015
- Mazzucato, M., 'The Entrepreneurial State', Demos, London, UK, 2011. ISBN 978-1-906693-73-2.
- Moscovici, P., *Structural Reforms 2.0 for a stronger more inclusive recovery*, http://europa.eu/rapid/press-release_IP-17-385_en.htm, Brussels June 9, 2016
- OECD (2011), "How's life? Measuring well-being", *OECD Better life Initiative*, Paris.
- OECD, *Beyond Industrial Policy – Emerging Issues and New Trends*, Draft STI Working Paper on Industrial Policy, Paris, DSTI/IND(2012)19.
- OECD, *New Approaches to Economic Challenges (NAEC), Synthesis*, OECD, Paris, May 2014.

- O'Sullivan, E., Andreoni, A., López-Gómez, C., 'What is New in the New Industrial Policy? A Manufacturing Systems Perspective', *Oxford Review of Economic Policy* 29 (2), 2013, pp. 432-462.
- Paech Niko: *Befreiung vom Überfluss, Ökom*, 2012
- Peneder, M. (2001), *Entrepreneurial Competition and Industrial Location*, Edward Elgar, Cheltenham, UK.
- Peneder, M., *Warum die Neue Industriepolitik die Deindustrialisierung beschleunigen wird*, FIW Policy Brief Nr. 23, Februar 2014.
- Peneder M., *Competitiveness and Industrial Policy, From Rationalities of Failure towards the ability to evolve*, *Cambridge Journal* 2017 (forthcoming)
- Porter, M.E. (1990), *The Competitive Advantage of Nations*, Free Press, New York.
- Porter, M.E., Rifkin, J.W. (2014), *An Economy Doing Half its Job, Findings of Harvard Business School's 2013-14 Survey on U.S. Competitiveness*, September 2014.
- Porter, M.E., van der Linde, C. (1995), "Toward a New Conception of the Environment-Competitiveness Relationship", *Journal of Economic Perspectives*, 9(4), pp. 97-118.
- Rattner, S., *The Myth of Industrial Rebound*, *The New York Times*, January 26, New York, 2014.
- Reinstaller, A., *An evolutionary view on social innovation and the process of economic change*, *WWWforEurope Working Paper Issue 43*, October 2013.
- Rifkin, J., *The Third Industrial Revolution: How the Internet, Green Electricity, and 3-D Printing are Ushering in a Sustainable Era of Distributed Capitalism*, *World Financial Review* (March – April), 8-12, 2012.
- Rodrik, D. (2004), *Industrial policy for the twenty-first century*, Paper prepared for UNIDO, September 2004.
<http://www.hks.harvard.edu/fs/drodrik/Research%20papers/UNIDOSep.pdf>.
- Rodrik, D., 'Industrial policy: don't ask why, ask how', in *Middle East Development Journal*, 2008, pp. 1-29.
- Rodrik, D., Subramanian, A., Trebbi, F. (2004), "Institutions Rule: The Primacy of Institutions over Geography and Integration in Economic Development", *Journal of Economic Growth*, 9(2), pp. 131-165.
- Sachs, J., *Europe as a soft power*, *Financial Times* 19.08.08.
- Sen, A. K. (1999), *Commodities and capabilities*, Oxford University Press.
- Stern, S., *Stern Review: The Economics of Climate Change*, HM Treasury, 2007.
- Stiglitz, J.E., Sen, A., Fitoussi, J.-P. (2009), "Report by the Commission on the Measurement of Economic Performance and Social Progress", Paris.
- Summers, L.H., *US Economic Prospects: Secular Stagnation, Hysteresis, and the Zero Lower Bound*, *Business Economics*, 2014, 49 (2), pp 65-73
- Wade, R.H., 'Return of Industrial Policy?', *International Review of Applied Economics* 26 (2), 2012, pp. 223-239.
- Warwick, K., *Beyond Industrial Policy: Emerging Issues and New Trends*, *OECD Science, Technology and Industry Policy Papers*, No. 2, OECD Publishing, 2013. <http://dx.doi.org/10.1787/5k4869clw0xp-en>

Appendix: The necessity of a two-stage approach (Box)

The best policy reaction to current legacies of the Financial Crisis and the uncertainty about future trends is a two-stage strategy (see Aiginger 2016).

Stage 1: Consolidation and reprogramming

In the first stage – the next ten to twenty years – policies will still have to focus on preventing new crises and solving inherited disequilibria (unemployment, debt, inequality). This is the ideal point of time to start rebuilding the infrastructure, so as to prepare for decarbonisation. Massive policy efforts and investments are required to redirect technologies and build a low-carbon infrastructure. It is the time for a green systemic industrial policy. These efforts will impact positively on economic dynamics and employment. And it is a good time to reduce unemployment by skill upgrading as well as to decrease inequality.

All importantly this first stage should not be the continuation of established policies. Solving inherited problems has to be combined with massive investment in order to prepare for the second stage. Aiginger 2016 therefore labels stage one as "consolidation and reprogramming" with a strong emphasis on the latter.

Stage 2: Socio-ecological transition

Long-term forecasts for industrialised countries predict lower growth rates declining even further along the time horizon. This may follow from the catching-up of emerging economies, limits of the planet, decreasing marginal utility of higher incomes or secular stagnation tendencies. Therefore, in the second stage, the highest priority has to be given to achieving higher levels of well-being (employment, housing, health) based on – in a historical perspective – low growth rates. We call this second stage "socio-ecological transition".

Preconditions for increasing welfare in this second stage are a reduced gap between high and low incomes, a lower public debt and a stable financial sector serving the needs of the real economy. These changes, as well as the decoupling of employment and emissions from output, have to be started by implementing new incentives, regulations and behavioural change as soon as possible in the first stage. Countries can switch to stage two earlier if preconditions are given. The reason for inward migration in Europe – economic ecological problems in the neighbouring countries – has to be mitigated by a better neighbourhood policy.
