

I suggest it is time to change approach

Allow me to contribute with this remark to the debate regarding unsatisfactory results of the German economy and worrying trend that we can observe since 2017.

Most of the specific issues the German economy is facing as headwinds have been described by more competent people (labour cost and unavailability of skilled workforce in many industries, lower flexibility of workforce, overall excessive regulations and bureaucracy, energy costs, taxation level, external pressures).

All these factors have, in my view, to a large extent two common root causes which are ultimately not fully appreciated in the public debate:

① Both German and European policies, which are mostly driven by Germany, while also impacting Germany the most, have not been for approximately last 15 years for too many industries and areas pragmatic but ideological. This very much in contrast with today's two major global competitors: China and the US. This leads to very substantial damages to many industries which are especially vital for Germany.

② EU and Germany didn't follow, quite consistently with the rather ideological attitude, any well thought through national/European industrial strategies and didn't capture latest developments of the world economy, again contrary to primarily China and also US. Equally importantly, this new economic reality where Europe is getting weaker and more fragile hasn't been reflected in the international trade measures and European regulations and many European industries are becoming very vulnerable. This trend will be even accelerated if we don't adjust our policies.

At this point, I would like to add that nothing in this article, except for the considerations around the current context of tariffs policies, is actually influenced by the latest development of the US, including the election of President Trump and all measures and moves he has taken since then. However, I believe, what I propose can be an answer to it. We should not, under the pressure he creates, step back from our values, but we have to find a new principle and ethos of our actions and policies. Because it is needed both practically for our economies and to find a new social compromise within our societies which start to be too polarized. I truly believe it is the rationality and pragmatism in the process of implementation of OUR values that can be the right solution.

1. Ideological policies

The first and key domain where our approach has been largely ideological has been the climate change fight. This has consequently spread to other areas as well (including, but not limited to, structural trends in education and labour market). Before going into detail, I have to stress that nothing in this article and in my conviction contests the need to address the climate change issues. However, I contest the way we are doing it. As you will see bellow, contrary to quite many, I don't think we need to relax or pause our ambitions in this domain, on the contrary. But we need to take different approach and perspective.

Back to the problem: The list of industries which need to be transformed to reduce emissions is vast already on its own – energy, automotive, chemicals, cement, steel – and

it does correspond to the backbone of the German industry. Moreover, I have observed that many analyses dramatically underestimate the system (primary) nature of these economic activities and their impact on the industries involved in their supply chain and on the whole domain of services. A decline of those primary industrial activities has and will have a multiplied impact on the whole economy – through indirect and induced effects. We estimate the overall effect on employment being three times the direct employment.

Let's have a look more specifically on the nature of the EU and German green transformation policies. EU and Germany, contrary to China and US, have decided to approach the climate change topic based on the philosophy LEAD BY EXAMPLE, i.e. to show the world that zero carbon economy can be built and that this can be done while maintaining prosperity. This approach is on its own already quite questionable with first obvious risk that, if the others will not follow, we will never solve the climate change problem as EU27 GHG emissions currently account only for less than 7% of global GHG emissions. Moreover, serious mistakes were, unfortunately, made in the implementation of this strategy.

1.1. No interest in economic impacts of green transformation

First major mistake: EU puts all the attention on climate goals, i.e. the emissions reductions, and paid almost no attention to the question how EU will maintain prosperity and how EU's GDP will benefit from the transition to low/zero carbon economy. Typically, it was simply stated as a fact that the transformation would bring incredible opportunities for our economies.

Energy prices

More specifically for competitiveness, we have completely neglected to benchmark our power and gas prices to those in major competing regions.

Today wholesale electricity (year ahead base load) costs around 100 EUR/MWh in Germany (but amounted to multiples of this level in the energy crisis in 2022). This compared to very stable price levels of electricity in US of around 30 to 45 EUR/MWh and on average around 60 EUR/MWh in China. This difference was opposite before the energy transition – electricity cost just above 20 EUR/MWh in Germany before the implementation of EU ETS (CO₂ taxation) and still between 20 and 35 EUR/MWh before the reform of EU ETS, called Market Stability Reserve Mechanism, pushed the price of CO₂ allowance from 5 EUR/t dramatically up, with peak price nearly 100 EUR/ton. The reason for this sharp increase of electricity price in the EU and Germany is primarily precisely the taxation of CO₂ emissions, i.e. the price of CO₂ emission allowance, which today amounts to around 80 EUR/ton in Europe compared to zero in the majority of US (only California and some regions of Northeast US being the exception with the CO₂ tax from 15 to 35 EUR/ton) and on average 11–12 EUR/ton in China, which opened its emission trading scheme only in 2021.

As the EU power price have been pushed up the CO₂ taxation, it could have been organized so that the price remains at or near the level of the US price while still ensuring the switch from hard coal fired power generation to the lower emissions gas fired power generation, which is currently the only practical consequence of CO₂ taxation in the German and European power generation mix. In normal gas market that we have witnessed until the 2022 energy crisis and which is largely expected to come back in 2026, the switch from coal to gas happens already around 30 EUR/ton of CO₂, while the next fuel switch, from gas to green hydrogen, doesn't happen even at 100 or 200 EUR/ ton of CO₂. Hence the CO₂ price at 80 EUR/ton does importantly increase the

price of electricity for final consumer (see below), but does bring only very marginal environmental benefits compared to a CO₂ price around 30 EUR/ton. I note that the development of renewable energy was always based on guaranteed tariffs and fully independent from the actual market price of electricity.

CO₂ price around 30 EUR/ton would mean much more competitive German power price around 50 EUR/MWh in normal gas prices situation (with peaks around 70 EUR in current gas price peaking environment).

For gas, the situation is more complex. The US gas price is much below the EU price (nowadays 13 EUR/MWh in US vs around 50 EUR/MWh in EU) for two reasons – US massive shale gas extraction and the dramatic drop of Russian supplies to Europe related to the horrible war in Ukraine. Yet, our policies are not helping: the EU, contrary to the US, is experiencing continuously decreasing domestic production of all hydrocarbons fuelled by climate and environmental restrictions. This makes the EU gas market tighter and today fully dependent on LNG imports with very volatile prices. Another example is the current situation of the imports of Russian gas to Europe. It has been strategically critical to become independent from Russian gas. But the termination of already very limited Russian gas flows to Europe via Ukraine pushed, in the context of very tight EU gas market, including the need to supply Ukraine, the price of gas in Europe up by app. 20 EUR/MWh, causing a damage to the EU consumers of around 75 to 90 billion EUR annually (combined effect on gas and electricity costs), while actually creating profits to Russia which is supplying to Europe less gas for higher overall value given the booming unit price (via LNG supplies and TurkStream) and massive profits if we take into account the global Russian supplies. I think it is quite obvious that this gesture doesn't bring the effects Ukraine has aimed for. True, this step has been decided by the Ukrainian president but the EU has mostly applauded him.

We can conclude that gas cost in the EU can't be at the US level, but for sure they could be close to half of what they are today, if our policies were more pragmatic.

Missed opportunity to build new industries

More specifically for the missed opportunities for the German industry, EU (and within EU Germany at the first place) was the leading global investor who enabled the renewable energy technologies development but naively gave the massive opportunity to China who took absolute dominance both in the production of PV panels (approximately 85% global market) and the wind turbines (app. 65% of global market). Yes, the Chinese were more competitive, and the rules of the market simply worked in their favour, but many European budgets have been burdened for 15 to 20 years with the obligation to pay feed-in tariffs for solar power at the level of multiples of today's costs (see below) and this major investment in hundreds of billions of Eur didn't bring any strategic benefit to the German or European economy.

Much more dramatic in terms of impacts is the situation of the automotive industry. The push for the decarbonisation of the transportation came from the EU (mostly driven by Germany) but almost the whole opportunity has been captured by China and the US who dominate the global EVs market; China dominates also the battery market. Instead of organizing the push together with the German and EU automotive industry to maintain our global role in the car making we have taken the automotive industry as an enemy who needs to be forced to behave. We start to face the consequences. While the global car market has been sharply rising (since 2000 by almost 65%), the European production has been dropping in last years and is lower than in 2000 (around 18 million today compared to above 20 million in 2000). China is today producing close to 40 million vehicles, while it was only 2 million in 2000! And while China has made a huge push towards EVs as their key strength, the EU regulation is pushing super strong against our own strength –

efficient combustion engines – before we become eventually competitive with EVs. Similar mistake is about to happen in the steel industry with the too early push to the green hydrogen direct reduction technology in Europe and too early and strong push of the chemical industry to the use of green hydrogen.

1.2. Unrealistic goals are pushing concerned industries out of the EU

Second major mistake in the implementation of the LEAD BY EXAMPLE strategy has been the goal settings. The goals have been set for most industries in an unrealistic way (sometimes physically impossible, sometimes economically unacceptable). This created a complete confusion and fatal concerns on the concerned industries side. I have to note that Germany assumed the sad role of the leader in the unrealistic ambitions setting. While France has been able to at least partially offset the threats coming from the EU framework by pragmatic bilateral offers (taxes, cheap nuclear electricity, investments supports underpinned by strong personal involvement of the French president Macron in negotiations with potential important investors), Germany has constantly sent signals that we need to push the EU ambitions even further to the zone of «unrealistic» and did very little to keep industry in the country or attract new investments.

The companies which had the opportunity to move their productions have mostly decided to do so and they can't be criticized for it – when comparing legislation, costs and complete uncertainty about the framework which is unrealistic and only hoped to be adjusted in the future, the decision to opt for more favourable geographies, including the US, is de facto stipulated by law. The others are typically trying to postpone the decarbonisation investments as they hope to see more clarity in the framework and goals to be reset to more realistic levels. Those who are already investing will be largely punished for their naivety (as the goals will really need to be reset to more realistic levels and the framework will evolve). This is precisely what has happened in the power generation segment and about to happen in other industries (steel).

The confusion around targets is interlinked with complete uncertainty about the future CO₂ price. The German and EU industry has strictly zero visibility, especially in the current political context, in this regard – CO₂ can cost 30 but also 150 EUR/t. But much smaller price difference determines what technology is going to be economically viable and competitive. In this context, a responsible decision about long term investment is de facto impossible. Also, as mentioned before, the unrealistic goals suggest the regulation will have to evolve. But the industry has zero visibility when and how.

1.3. Irrational speed/sequence of actions

The green transformation has been pushed with incredible urgency which prevented any reasonable planning while the benefits of accelerated actions were de facto none in the global scale. To name just one example. The feed in tariff for 1 MWh of solar power started in 2004 above 500 EUR/MWh, was around 200 EUR/MWh in 2012, while it costs below 60 EUR/MWh today. If some reasonable time was given to the producers of PV panels to get ready for this expansion, the costs of first 33 000 MW installed solar power plants, representing around 40% of German installed FTVE capacity, could have been much lower (if the system of guaranteed prices started in large scale when costs were at the level of 100 EUR/MWh, 120 billion EUR could have been saved for German consumers).

The mentioned urgency of the push towards EVs in the EU and of the chemical and steel industry to H₂ have been mentioned above.

1.4. Summary to the green transformation

German industry is less competitive, new investment are drastically decreasing, many productions have been and mainly will be reallocated elsewhere. We haven't seen yet real impacts on the labour market but they are coming and will have unfortunately structural consequences. At the same time, the global emissions are rising: from 49 Gt CO₂eq in 2015 to 53 Gt CO₂eq in 2023 and our strategy LEAD BY EXAMPLE doesn't work. We can clearly state that de facto no relevant state (outside the EU and closely related countries, including UK) is following our example. The decarbonisation takes place namely where economical (US shift coal to gas, China's strategy of electric vehicles industry development) or plausible for other reasons (China's major cities air pollution and also its push to reduce strategic dependence on energy imports) and opportunities arising from decarbonisation are captured primarily by the two main global competitors. US is leaving the Paris climate treaty, China is still on the CO₂ growth trajectory having and targeting carbon neutrality in 2060, while creating a massive and globally leading industrial ecosystem around the decarbonisation as described above. China has only last year started construction of 95 GW of new coal fired power plants which is nearly double of the overall EU hard coal fleet capacity (around 50 GW).

In a nutshell, EU and Germany at first place have behaved naively, our purely value/ ideology driven approach, contrasting to the pragmatic approach of our two main global competitors, can be maybe appreciated for the plausible motivation, but our economic weakening will not solve the problems of the changing climate and will rather discourage others to act.

2. Omission of major change in global economic balance and adequate reaction to that

The combination of all the facts above for traditional industries and natural lead of US in digital economy and electric vehicles as the mother country of those and the systematic Chinese state strategy to build new industries, has completely changed the global economic balance. Germany (and the EU) is seeing quite negative trend of its trade balance already now and it will only accelerate. While the decision to allow many more simple consumers goods productions to move to China or other developing countries was a logical and fully acceptable consequence of market forces, reflecting the different production costs and the conditions of the labour market, the shift of the most rapidly growing new industries, such as digital technologies, electric vehicles, green technologies and e-commerce platforms are of major impact and concern.

My view is that we simply came into a point where Germany and the EU need in quite a few strategic areas a protection not to be protected from, specifically from Chinese competitors. Key areas are those concerned by the green transformation, hence cars manufacturing, steel, chemicals and other energy and CO₂ intensive industries. It is clear that certain trends negative for Germany and Europe are irreversible as we simply don't have realistic ways how to become globally competitive, but some can be either reversed or at least more time and much clearer and better framework can be given to the German and European industry to get more prepared.

This however requires a different, much more pragmatic approach also to the international trade rules and European regulations.

For avoidance of doubt, I add that the implementation of Carbon Border Adjustment Mechanism (CBAM), the traditional EU vision of effective level playing field solution, will not do the job on its own. First, CBAM deals only with different CO₂ taxation while other major cost disadvantages on the side of European producers, implied by the green

transformation, such as above explained electricity costs, are not addressed. Similarly, for certain industries, very different level of personal costs, social and ecological standards can't be ignored (Chinese vs European steel). Also, CBAM only protects from imports, doesn't help our industry to be competitive outside of the EU. Hence, we can conclude that CBAM can be part of the solution but for sure is not the only solution and broader measures are needed.

When talking about the need for a better regulation and protection, I have to mention two domains, known to me from my own business practice.

I consider as unacceptable how we have allowed to destroy the European media sector mainly to the favour of US big tech which have taken, in absence of any reasonable regulations, the European advertisement market. This my long-lasting call for the need of a new social networks regulation is motivated by the need to protect human rights and our democratic systems, however the economic impact is not negligible – the volume of advertisements revenues, btw largely untaxed, currently flowing from Europe to Google, Meta and Amazon alone amount to some EUR 116 billion. Chinese companies TikTok, Baidu, JD.com, and Tencent collectively take some EUR 14–15 billion.

Second, allow me to warn that the Chinese e-commerce expansion to Europe is about to become next important structural problem. The imports of China (mainly Shein and Temu) are currently taking de facto all the growth of the EU e-commerce market and are starting to put existential pressure both on the EU e-commerce and wider European retail ecosystem which is the #1 employer in EU with ~26 million people across retail and wholesale in Europe. E-commerce is becoming a larger share of this pie with the number of e-commerce businesses in the EU approaching 500,000 and estimated direct employment of 1 million people in pure e-commerce and another more substantial part in companies providing omnichannel services.

Time to change approach

For all these reasons I believe it is time to change approach. Simply by replacing the approach from “LEAD BY EXAMPLE” to the new “WE BRING SOLUTION” and by taking a more pragmatic and sophisticated approach also in the domain of international trade measures and European regulations with the aim to the protect German and European economies in selected vulnerable domains.

Green transformation

For the green transformation, the recipe is simple: We have to start acting globally.

Here an idea of the step plan:

- ① The emissions reductions target in the EU will be reset at the levels which are more realistic and avoid the use of technologies which are absurdly increasing the cost for the German and European businesses and citizens. Example: cost of electricity produced out of natural gas, net of taxes paid to states, namely CO₂ price, is today around 110 EUR/MWh and rather around 60–70 EUR/MWh in normal gas price situation, while it would be around 350–400 EUR/MWh if green hydrogen is used instead (ignoring the infrastructure costs). Use of natural gas in power generation accounts for ca 5% of EU emissions. Hence it makes clearly sense to maintain gas fired power generation in place until H₂ becomes eventually competitive. Same needs to be done for each relevant industry, the automotive, chemical and steel industry being in the heart of the debate.
- ② To compensate the pragmatic goals adjustments as per point 1, EU will commit to ensure that a volume superior to our remaining emissions envisaged in 2050 (I suggest

double), is going to be saved in the meantime by EU actions outside Europe. EU will establish a « Marshall » global climate plan and either invest or enable to EU companies to invest abroad into the modernisation/ replacement of highly polluting technologies. I note that many technologies outside Europe are polluting two times more emissions than the existing EU standard – hence it is much more rational to replace these highly polluting technologies rather than pushing out of Europe every single ton of CO₂ even if produces by highly efficient technology. This action will also export new technology standard to the concerned markets and rather than trying to show an example (which doesn't work) we will create local competitive pressure by commissioning more modern technologies. The methods of implementation can vary from full EU investments (special EU fund can be established), but mostly insurance of political and regulatory risk will be sufficient as most of the investments will be economically attractive for the private sector, especially if supported by limited incentives (such as certain level of CO₂ credits). The total funding volume of several hundreds of billions (largely private) can bring massive CO₂ savings (cost of nearly 900 MW modern CCGTS – low emissions gas fired power plant outside Europe shall vary between 300 and 600 million EUR and it can save around 3 million tons of CO₂ per annum).

③ Any EU supported investment will have to use a certain minimum (high) European industrial content of supply which will provide an important to massive stimulus to the German and EU industry (power generation technologies, chemical technologies, refinery technologies, cement and steel technologies, trains and public transport technologies, including material parts, to be produced to a defined extent in the EU). These are also domains where Europe has the capability to produce high quality technologies and this plan can strengthen importantly our global role in them.

④ CO₂ price mechanism has to be reconsidered. The element of traded instrument can be preserved but we need to implement a long term costs corridor at reasonable level preserving EU competitiveness and providing clear long term visibility to concerned industries enabling the implementation of decarbonisation investments. This with firm guarantees of the stability of this new framework. I note that this strategy doesn't frustrate the interest to develop new industries (such as hydrogen industry) but not at the expense of German and EU competitiveness (public subsidies can be used, if wished, until the product becomes economic).

⑤ The free allocation of CO₂ to the German and European manufacturing industry must be extended if and until adequate trade regulatory measures (as per below) will be adopted.

International Trade and Regulations

For sure, I don't suggest to contest the idea of global free trade, nor to impose general tariffs on imports as president Trump does for certain countries or products. On the other hand, we need to implement selective measures which are necessary to protect certain German and European industries.

① The list must include industries impacted by the green transformation where full direct and indirect effect of CO₂ taxation has to be compensated, including different energy costs, and export competitiveness have to be dealt with, i.e. we must not only create level playing field to protect cost level in the EU but to compensate increased costs of our producers for their export activities where truly relevant.

② Some strategic industries, such as steel industry or its defined segments, need to be protected in more targeted way to address not only very different CO₂ and energy costs, but also different level of other environmental regulations and very different labour costs and conditions (I would propose to consider, for selected industries, ACBAM – Acquis

communitaire border adjustment mechanism, i.e. to compensate, for selected industries, the different cost based caused by value driven legislation in general, not only for CO₂), some for reasons completely unrelated to the Green deal (e.g. the protection from Chinese e-commerce).

③ We must review the sectors where the current European regulations are weakening the European companies too much, either by over-regulating (banking sector) or heavily under-regulating (BigTech vs media as mentioned above). I use the opportunity to note here I fully agree with the conclusion of the Draghi report that we have to a different approach to the antitrust rules. The digitalisation and the steep evolution of related technologies and services have, on one hand, changed the rules of the game and dramatically favours the big players (the cost of the quality digital solution is growing very sublinearly with the size of the company – hence huge US and Chinese companies have dramatic cost advantage over much smaller fragmented European players) and, on the other hand, globalized importantly many segments of the market. Hence our rigid view on the relevant market definition in the antitrust law is simply not any longer reasonable.

I understand some of these measures may sound unrealistic or revolutionary at first sight but they are not in the current context and they are vital for Germany and Europe. China who will be impacted by the US tariffs desperately needs EU market (China's exports to the EU have exceeded EUR 500 billion EUR last year). Also, Germany and the EU has much less to lose in trade war with China – EU exports to China are only EUR 230 billion, hence less than half of our imports. For the US, the impact on our actions would be quite limited and we will have to “trade” the tariffs and regulations with the US anyway and have still good cards to play (oil, gas, military imports as a few examples). To conclude, the current context is creating an ideal ground for a new European approach to international trade regimes and needed domestic protective regulations.

Conclusion

If we implement the measures above (or smarter measures with same or better effects) and restore rationality and pragmatism as strong pillars of our policies, while fully maintaining our values and global fight for them, we will become more resilient (for the quality of life of Germans and Europeans but also for the capability to promote our values), globally more relevant (together with technologies and investments we will export our influence), more inspirational (new technologies in developing countries will inspire, improve the quality of life of people there – reduce also local pollution and create local competitive pressure) and we are going to save more emissions. I really suggest it is time to act.