Trade Defence Measures in the age of GVCs Learning from the EU-China Solar Panel Dispute

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1. Introduction

The 2008 financial crisis induced a great recession that the world is still struggling to overcome. The crisis had raised fears of the return of Depression-era protectionist tendencies among the larger global trading nations, which was later nullified by empirical evidence suggesting that the protectionist response to the slowdown in global economic activity has been relatively modest (Rodrik, 2009; Bown, 2011). However, new research on the relationship between growth, real exchange rates and trade protectionism (Georgiadis and Gräb, 2013) show that despite the limited overall protectionist activity since the financial crisis, the above relationship continues to hold, especially in the "murky" trade policies. More importantly, they also find that trade policies of G20 advanced economies responded more strongly to changes in domestic growth and real exchange rates than those of G20 emerging market economies, and that G20 economies trade policies vis-a-vis other G20 economies were less responsive to changes in competitiveness.

Simultaneously in the aftermath of the financial crisis there has been an upsurge in the developed country interest for industrial policy, in particular in the high-value and knowledge-intensive technologies/areas of economic activity or the *green* economy (The Economist, 2010; Van Reenen, 2013), with some proponents suggesting in principle a revision of the current global strictures which bar such policies as unacceptable interventions in free markets. They argue that industrial policy has a role to play in boosting growth and creating employment in the least developed areas/vulnerable sectors of rich countries as also in response to the apparently successful policies of fast growing economies, notably China, and the challenge they may pose to competitiveness, not just in lower value-adding activities but at other points in the global value chain (GVC). This increased interest in industrial policies, broadly defined, comes at a time when global value chains have become more complex and more important, and when competition from emerging economies is growing, even in activities and markets that were, until recently, considered the core strengths of OECD countries (Warwick, 2013).

This explains the rise in the use of trade defence measures in all the G20 countries in the aftermath of the financial crisis, including the advanced G20 nations¹, which is notable since the present high degree of vertical fragmentation of supply chains across countries is expected to

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¹ Erixon and Sally (2010) notes that "The current US administration's overall approach is defensive; and trade policy is very low down its list of priorities, indeed crowded out by domestic priorities. The EU is also in defensive mode. Generally, when the Single Market is opening up and integrating, EU trade policy is more outward-looking and proactive. (But w)hen the Single Market is under stress from internal protectionism, EU trade policy turns to navel-gazing and gives way to protectionism against outsiders. That happened in the 1970s and '80s. And that is roughly the situation today".

annihilate the incentives to shut domestic markets to foreign producers and suppliers². The 1970s shocks (notably the collapse of the Bretton Woods system and the oil-price hikes) had also ended a long boom and triggered more government intervention in the developed countries where new labour-market and capital-market regulations were introduced and subsidies were sprayed at vulnerable sectors. The use of antidumping (AD) measures in the US and the EU also accelerated sharply in the wake of the 1970s' crises. The result of accommodating demands from domestic industry was the "new (creeping) protectionism" and "managed trade" of the 1970s and 1980s, which is a scenario that has been creeping up on the world lately (Erixon and Sally, 2010). But recent experience suggests that the ground-realities may have started to change. The changing structure of world production and trade has new implications for the demand for (and political economy of) 'traditional' WTO-legal trade policy (protection) and defence measures, viz. use of AD and antisubsidy actions, which needs to be reflected in the new-age global trade rules.

An oft-expressed regret about the WTO has been that its rule making pace and ability has failed to keep abreast with the demands of the global marketplace. The implication is that current trade policy measures will not be an effective instrument to deal with market failures, going forward. The narrative demanding for new age rules call for reform and global regulation in energy, currencies, sustainable development and the environment on the one hand and focusing on fresher subjects like investment subsidies and cross-border investment barriers, trade in environmental goods and services etc. Studies have highlighted (18 case studies in the World Economic Forum 2013 analysis) that clusters of policies jointly impact supply chain performance, suggesting that a concerted approach is needed to cut across different policy domains that collectively generate supply chain barriers to trade³. However, disciplines on AD and other instruments of contingent protections in use have not been discussed, beyond the limited discussions on zeroing in antidumping agreement reforms⁴. As noted in an earlier paper, for being time-relevant, a new WTO agenda should recognise the centrality of the GVC production and trade patterns when (re)designing the global trade governance rules in order to reflect new business models and trade trends; the trade facilitation agreement adopted at the Bali Ministerial

² Supply chains change the incentives to use trade policies, which generally tend to restrict use of measures that restrict imports and exports of natural resources and raw materials that are upstream inputs into GVCs. Tariff and non-tariff measures that often generate greater and unintended distortions are thus unlikely to be demanded by the business community.

³ The case studies note that supply chain efficiency is not simply about trade facilitation at the border; it also involves the ability to invest in facilities and protect intellectual property, the costs of complying with regulatory requirements regarding health, product safety, security, and the exercise of market power by a dominant entity that controls access to key services or a lack of competition which may hinder the functioning of some parts of a supply chain, etc.

⁴ Zeroing is a calculation device used by the US to establish an AD duty, in which the negative values in dumping difference calculations is counted as zero. WTO rulings have confirmed that this method increases, often substantially, the exporter's margin of dumping and thus the amount of AD duty that the exporter has to pay, as opposed to the *lesser duty rule* method applied by EU and some other nations like India.

Conference of the WTO (MC9) is only a part of this requirement, albeit an important first part (Karmakar, 2013).

Literary work analysing the failure of world trade rules to keep up with the global marketplace has been limited to discussions on futility of traditional tariff and quotas as efficient trade policy tools (Hoekman, 2012)⁵ and on how regulatory networks can be mobilised to help the trade regime keep pace with practical realities in a bottom-up approach to solutions (Cho and Kelly, 2013). This paper presents new findings from the ongoing EU-China solar panel dispute to argue that the future of trade safeguard measures as effective trade policy (protectionist) instruments may be clouded by increasing business antipathy towards overt support for AD and antisubsidy actions/duties. Pursuing a *whole of the supply chain* approach in international trade negotiations and trade policy making at home thus calls for new thinking on invocation of the traditional trade defence mechanisms and on reform of trade defence instruments to incorporate the deeper disciplines necessary to underpin the supply chain trade, both at national and multilateral levels.

In the rest of the paper we first discuss the EU-China solar panel dispute and it's larger ramifications vis-à-vis the German solar value chain, and then conclude with some implications for future trade policy and use of trade defence measures.

2. EU-China solar panel dispute

2.1 Politics of Safeguard Measures

The continuing row on the proposed EU tariffs on solar panel imports from China had almost led to a serious trade dispute between Brussels and Beijing. EU's antidumping and antisubsidy investigations against Chinese solar firms were launched in 2012 at the request of EU ProSun, representing around 25 European solar-panel producers including Solarworld AG (SWV) of Germany. However, early this year, the Chinese delegation to the EU put out a tough response, in addition to mobilising as many as 18 of the EU's 27 member states led by Germany to oppose the provisional and temporary six-month punitive AD tariffs averaging 47.6 percent proposed to be imposed on imports from Chinese solar producers to combat allegedly unfair competition from China; to begin with, duties were set at 11.8 percent for the first two months period⁶. At the end, the parties agreed to a negotiated solution on solar imports from China, whereby Chinese producers agreed to a minimum sales price and an import quota; Chinese companies can export to the EU upto 7 gigawatts per year of solar products without paying AD duties, provided that the price is no less than 56 € cents per watt. EU governments must decide in December whether to back the July price deal, but this appears more feasible than getting the member states to

⁵ The argument is that GVCs and the 'Made in the World' phenomenon have changed the political economy of protectionism, by making some economies so interconnected and integrated that trade policy is no longer a very useful tool to assist domestic industries, even in the face of a massive external demand shock. In this new environment, many traditional (tariff based) tools of trade policy have become obsolete.

⁶ The recent imposition of AD duties ranging from 18.32 percent to 249.96 percent on solar-energy cells imported from China (averaging 30 percent) by the U.S. Commerce Department supported the EU Commission's case.

unanimously support the provisional antidumping duties imposed in June⁷. More recently, the EU has initiated an AD review against the imports of solar-grade glass from China.

As in the case of any AD dispute, reactions varied between the affected units bemoaning loss of competitiveness, profitability and jobs and those of consumers and producers benefiting from the lower priced imports; given the modern distributed production chains across countries, import content of exports is about 40 percent today while the share of intermediate goods in trade has risen to 50-60 percent of global merchandise trade. The former group usually supports turning to trade instruments to offset the consequent competition effects in the affected economic sector, while the latter also fear economic consequences on other sectors and cross-sectoral efficiency issues. Furthermore, research on average efficiency and costs in the US/European solar manufacturing vis-à-vis production in Chinese facilities do indicate that about 18-30 percent of the price advantage in Chinese solar cells do emanate from cost efficiency of vertical integration, economies of scale, and negotiated discounts from vendors of intermediate inputs, and machinery and equipment. These are in addition to the advantages from lower Chinese labour costs and cheap trade credit availability.

Thus, in view of the protracted slowdown in trade growth below their long-term average rates worldwide and particularly in Europe, it was unclear whether it was the economics or the politics that was motivating these safeguard actions. In fact, research has indicated that advantages from Chinese industrial policy and state subsidy explain only about 3-5 percent of the total price competitiveness. It also clear that safeguard actions cannot redress the relative competitiveness and cost efficiency concerns needed for a longer term and viable resolution of the problem.

2.2 Examining the German industry's antipathy for solar antidumping duties

But more interestingly, the absence of sustained lobbying from the leading German solar manufacturing firms for the EU-China solar panels case was a surprising move. It may be recalled that this is also in stark contrast to the action of their US-based counterparts, who actively initiated and supported the imposition of punitive AD and countervailing duties on solar cells and wafers imported from China, and continue to do so⁸. US trade activism on this issue may inadvertently result in obstructing the solar sector's development and the country's energy/ environmental and export policy initiatives, but it nevertheless confirms to the established plays of the trade remedy rule-book adopted worldwide; AD and antisubsidy actions are aimed at raising the domestic industry's chances of reclaiming equal footing vis-à-vis below-market-cost sales by foreign suppliers.

⁷ Under EU rules, the Commission has the authority to determine whether the provisional duties are enacted. But opposition from member states potentially weaken the Trade Commissioner's authority as they can ultimately block his proposal. The Commission also found that Chinese solar-panel makers receive subsidies amounting to 11.5 percent of their sales turnover, but decided to not impose any provisional anti-subsidy measures.

⁸ SolarWorld, the US manufacturer that spearheaded the coalition behind the Department of Commerce case, is now contesting the year-old solar duties at the US Court of International Trade, arguing that the final duties that the government agency had determined were actually too low.

So why did the European solar manufacturers not support the DG Trade's trade AD action against Chinese solar panel imports? In particular, the motivations of the German solar manufacturers in not supporting the Commission's safeguard actions against Chinese imports is the curiosity that we proceed to satisfy. Notwithstanding the lobbying by the Chinese delegation to the EU and threats of retaliation from China through actions against European exports and investments in the mainland⁹ that may have made the German solar industry unwilling to continue with their open support for the proposed AD duties¹⁰, this analysis suggests that conflict of interest within the local solar industry (especially the large integrated manufacturers) may have been at the root of the antipathy for the AD tariffs. This is more significant in view of the fact that Germany is clearly the global solar photovoltaic (PV) market leader in terms of per capita and total solar power capacity (MW)¹¹, with 33 percent of global cumulative PV installations in 2012, which was around 47 percent of the cumulative PV installations in EU27. It is also an important solar panel manufacturing base, and the current world overcapacity in PV modules is having a severe effect on the companies all along the solar value chain; protection from dumped products will undoubtedly benefit the local industry.

2.2.1 Key Features and China-linkages of the German solar industry

A closer look at the German solar industry reveal interesting cross-linkages with China among the larger players in its solar industry value chain. On the one hand, industry data show that of the 69,000 tonnes of solar-grade polysilicon (the main raw ingredient used for making solar panels) that China consumed in January-June 2013, 41,000 tonnes were imported. China's solar panel makers prefer imported polysilicon, which has a higher purity that helps in energy conversion¹². Overall, 2012 is said to have seen 9,300 tons of polysilicon imported into China from the EU, representing 30.8 percent year-on-year growth; EU-originated polysilicon in China is mainly exported from Germany¹³, and Italy to a lesser extent. Thus, solar-polysilicon exporters were unlikely to support the EU dumping action, since a retaliatory punitive AD tariff in China on imports of polysilicon would hurt the German firms that export the material.

But even for the import competing solar sector in Germany (and Europe), the outcome of the above actions (after balancing the EU and Chinese safeguard actions) didn't imply a definite gain;

⁹ In mid-September 2013, China imposed preliminary antisubsidy duties of upto 6.5 percent on some imports of US solar-grade polysilicon, in addition to the 53.3 to 57 percent AD duties imposed on US polysilicon in July. China did not impose tariffs on the polysilicon imported from the EU following successful German government efforts to reduce tensions between the EU and China since the June 2013 decision by the European Commission to impose duties on Chinese solar panel imports.

¹⁰ Not surprisingly, none of the protestors have voiced their unhappiness at the negotiated solution.

¹¹ Although, in 2012 Bulgaria overtook Germany to lead in terms of new solar power capacity per GDP and per capita.

¹² In fact, domestic business lobbies have been a major force pushing the Chinese Commerce Ministry to curb polysilicon imports that exceeded US\$ 2.1 billion in 2012.

¹³ Munich-based Wacker Chemie AG (Europe's largest polysilicon maker) exported the most, according to Xinhua.

according to a DG Trade assessment, the solar investigations presented at best a 'borderline outcome'. In fact, the major German solar manufacturers as well as the consumers were likely affected negatively, an outcome of several concurrent developments.

The Fukushima disaster in 2011 prompted Germany to abandon nuclear power and rely on a mix of other energy sources; in particular, renewables are now required to supply 80 percent of electricity needs by 2050. This further reaffirmed the targets of the Renewable Energy Sources Act (EEG), implemented in 2000. Under the *Energiewende*, producers of wind, solar and biomass power are guaranteed fixed feed-in tariffs or FiT¹⁴ – subsidies in layman language – for 20 years, which is structured to decline over the years¹⁵. The EEG introduced a fundamental change in German energy supply: every citizen that owns a house can now become an energy producer. The grid system operators are committed to accepting this electricity as a priority, and to paying fixed fees for it.

However, while this spurred an investment boom in renewables, these subsidies¹⁶ didn't accrue to the benefit of the large solar firms/energy utilities in a big way. This is because of the specific structuring of the green subsidy under the EEG which encouraged distributed generation, thus benefitting the small and home-use renewable producers more¹⁷; also, in Germany, residential solar systems are exempt from revenue, sales, or value-added taxes. The rising private rooftop solar PV generation on the other hand has led to a reduction in electricity demand from the grid, which in turn means that grid-connected renewable producer-consumers are not paying adequately towards the maintenance of the transmission grid system, leading to what is known as the "utility death spiral"; utilities generally include a portion of fixed costs in their energy-use charges. Thus large solar firms do not necessarily receive more subsidies or incentives under the

¹⁶ Reportedly, the cumulative outgo in Germany on account of solar subsidies in the past 10 years has been more than \in 100 billion.

¹⁴ A FiT is deemed the most effective means of developing renewable energy. It is the same as a grid power purchase agreement, but is set at a much higher rate (typically at two to four times) to allow investors a guaranteed return on investment. As the industry matures, this is reduced to exert cost pressure on manufacturers. Recently Germany (along with India and the UK) reduced the FiT, but contrary to expectations of less solar getting installed, in fact, the solar installations went up because the local solar industry cut prices to keep investors interested. Availability of low priced solar PV modules helped this further.

¹⁵ According to the EEG Act, the FiT decline is dependent on the start year. The supplier that got a contract in 2010+t will get the 2010+t tariff until 2030+t. But investors in 2010+t+1 will get a lower FiT throughout the 20 years than investors in 2010+t. It fell to 24 € cents per kilowatt-hour (€ cents/kWh) for new plants in 2012 from 57 € cents/kWh in 2004; since 2010 semi-annual cuts in the incentives have accelerated, chipping the FiT from the then 43 € cents/kWh.

¹⁷ At least 60 percent of German renewable energy in 2012 was distributed generation. Furthermore, according to the German Solar Industry Association, solar-power generation for individual use is expected to grow to about 12 percent of all PV production in 2017 from about 4 percent in 2012. Germany's big four utilities -- EnBW, E.ON, RWE, and Vattenfall -- produced 75 percent of the country's power, but were responsible for only 5 percent of renewables investments. The big four may also have decided to not go strongly into the renewable segment for strategic reasons, including legacy issues. *Preliminary draft, not to be quoted or cited*

German system. In comparison, the US model of boosting the clean energy industry with federal tax incentives and subsidised loans for companies benefits the larger utility-scale renewable energy producers, like big solar farms¹⁸, which according to some analysts also keeps the US commercial solar prices high when compared to say the German rates. Unlike the FiT which continuously pushes for cost reduction, the federal solar tax incentives and subsidies in the US help to support higher input costs of the solar panel modules¹⁹.

Thus the potential support and voice of the large solar firms and electricity utilities in favour of a duty which increase/ keep high the solar panel costs was missing in Germany. Moreover, the consumer voice on AD duties, also supported by the green lobby in the country, was against a move which would have kept the module prices high; the rapidly falling prices of solar panel modules (the decline in solar costs by almost a quarter is as much an outcome of the huge overcapacity in both Europe and China, as the maturing of the technology) has been helping the individual solar energy consumer-producers recoup their investments faster, thus encouraging more renewable installation²⁰. The AD duty was not in the interest of the solar electricity producers-consumers/promoters.

But the renewable energy boom has led to a peculiar situation vis-à-vis the energy cost and pricing in Germany. Media reports highlight that in Germany, electricity is more expensive for industrial users than the EU average²¹ and more than double when compared to the US. Added the impact of the US shale gas revolution²², German companies on average pay more than three

 20 In a recent move, some European countries (viz. Spain) have decided to levy a fee on renewable-energy production for personal use, for reasons of shoring up public finances as part of national austerity measures, which could also be used for maintenance of the transmission grid. In Germany an EEG surcharge is paid by consumers to offset the growing input of renewable power that enjoys priority in the German grids. The EEG has of late come under renewed criticism because of the high costs for consumers owing to the fixed FiT payments to operators of renewable power plants and a decreasing amount of chargeable energy consumption to which costs can be allocated. In February 2013, the Federal Minister of Economics and Technology and the Federal Environment Minister presented a joint proposal for a short-term amendment of the EEG to claw back the rising EEG surcharge and expressed their will to fundamentally alter the EEG in the long term.

²¹ European consumers are also hit by relatively high gas feedstock prices, and also have to pay an extra charge to cover the more than € 30 billion of incentives to invest in renewables which EU countries spend every year. As a result, Europe's electricity is twice as expensive as America's.

¹⁸ Rooftop solar currently makes up less than one-quarter of 1 percent of the electricity produced in the US, although in the past four years there has been a spurt in residential solar installations.

¹⁹ It is argued that the existing US subsidies are so rich that developers can charge more and still meet investor expectations. This has led several think tanks in the US to push for an overhaul of the subsidy programs, to push companies to reduce costs over time and make the technologies competitive. Policy induced massive increase in solar panel installations in Germany has also brought down the price of solar considerably, making it nearly half as much as in the US, despite higher labor costs.

²² Thanks to the rapid increase in efficient non-conventional gas production, US companies pay about \$ 3.50 per million British thermal units (mBtu) for their natural gas. That is about a third of what Europeans pay. Preliminary draft, not to be quoted or cited 7

times as much as their US competitors for electricity. However, the story is a little bit more complicated than it appears. On the one hand, the surge in (largely distributed) renewable electricity production in Germany has led to a drastic fall in the wholesale electricity prices, from around \in 60 per megawatt hour (/MWh) in early 2011 to nearly \in 35/MWh in mid 2013 according to data collected by Bloomberg, as renewables-led oversupply plus depressed demand lowered prices; on June 16th, the spot wholesale price of electricity reportedly fell to minus \in 100/MWh in Germany's electricity market. This adversely affects the profitability of the electricity utilities, which are largely fossil-fuel based. Coupled with the lack of incentives as discussed above to support the AD duty demand of solar equipment makers, large solar energy firms were ambivalent.

On the other hand, the retail residential electricity prices in Germany are at levels that are among the highest in the world, partly because they include fees, surcharges and taxes for renewables that are one-and-a-half times, per unit of energy, of the power price; most of this surcharge is an effect of the policy design²³. While industrial users do not usually pay at the very high consumer price levels, and some energy-intensive industries (that consume more than 100 GWh, and whose electricity bills represent more than 20 percent of total costs) in Germany pay much lower rates²⁴ when compared to neighbouring France, most businesses (including in the service sector), and non-energy-intensive industries however, are required to pay the surcharge; a quick review of the businesses exempted from paying the EEG surcharge reveals that only a handful of firms benefitting from the German industry exemptions are a part of the solar value chain. This highenergy-price-led uncompetitiveness in turn has boosted the relocation of production activities in

²⁴ When FiTs were originally designed, energy-intensive industry was exempted from the surcharge to ensure that German industry remains internationally competitive. Currently around 2,295 business units (mostly in the manufacturing sector) and roughly 18 percent of power consumption in Germany (the share that energy-industry consumes) is largely exempt from the surcharge (paying only 0.05 € cents/kWh as opposed to the full 5.227 € cents/kWh), and the remaining surcharge passed on to other ratepayers (most businesses and all households) is as a result around 25-50 percent higher, depending on data used for analysis. The EU has recently issued a guidance for member states on how to award subsidies for electricity generation; another communication is expected by the end of the year on state aid to energy and the Commission is also reportedly keen to revoke the German industry exemptions, which has raised wariness in some sectors.

Cheap energy gives the US a huge competitive advantage, and energy-intensive activities – such as petrochemicals plants or refineries – that can relocate to the US are doing so.

²³ There is a debate regarding the allocation of the costs of the *Energiewende* with some arguing that household consumers carry a disproportionate share of the burden; by 2013, the German electricity price constituted of at least seven additional components, after the costs for production, transportation and distribution and electricity surcharges and levies (but excluding VAT) increased 63 percent since 2008. With the EEG surcharge, consumers pay for the difference between the fixed FiTs paid pursuant to EEG for renewable energy fed into the grids and the sale of the renewable energy at the EEX energy exchange by the transmission system operators. The renewables surcharge will amount to 6.24 € cents/kWh in 2014, of which 2.4 € cents will be attributable to PV. This is an increase of 19.38 percent from the 5.227 € cents/kWh in 2013.

the solar value chain to cheaper locations²⁵, including most likely even to China²⁶, and AD duties on imports are not in the interest of these firms, both the large integrated manufacturers in the solar value chain as well as the SMEs plugged into the solar value chain trade. These firms in the integrated solar manufacturing GVC are also likely to have a stronger voice when compared to the other SME import competing solar equipment manufacturers that are 'not' plugged into the global solar value chain.

This also aligns with the growing importance of services in the European companies that are highly integrated into the global value chains (di Mauro *et al*, 2013), and the companies in the solar production supply chain are unlikely to be exceptions. The value-added in the solar sector is less and less in the low-skilled panel production, and has shifted to the design and engineering of the modules, the production of converters, R&D on improving the efficiency of the solar cells and the service part of the solar value chain. A detailed analysis of the solar value chain and trade patterns therein will likely mirror the more well-known Apple i-Phone value chain and its pattern of production location. Hence, it makes sense for German firms to outsourcing of the low-value-added parts in order to get more competitive on the high-value-added part. Finally, production processes today are also much more finely fragmented to better exploit comparative advantages and companies reorient themselves towards higher-skilled and higher value-added service activities, especially in the higher-cost developed country markets. Thus the AD duties also decrease the price-competitiveness of the service providers in the solar value chain in Europe (viz. the panel assemblers and installers of solar energy systems) by increasing the cost of the key intermediate input, which is the solar panel.

3. Implications for Trade Policy and Use of Trade Defence Measures

After accounting for the multiple and dynamic developments in recent times discussed above, it is not surprising that the German solar industry as a whole lost its enthusiasm for the promised AD duty protection. The narrative here has materially changed from one of rich-country subsidies leaking away to the predatory foreign exporters to one of GVC interdependence and resultant concerns for both export-oriented and import-competing producers/players in the associated supply chain. The larger takeaway from the experience is that mercantilist/temporary protectionist measures used by sovereign nations (such as AD actions) in the era of GVC is becoming an increasingly Pareto-inferior policy option, particularly in the perspective of the business leaders. The EU-China solar dumping case thus provides important insights on the dichotomy in the motivations and actions of the two different groups of players – the (trade) policy makers and industry stakeholders – which should be taken into consideration in future.

Furthermore, the above also has implications for the use of industrial policy and its unintended fallouts (externalities) for the larger supply chain. The source of the problem is overactive

²⁵ BusinessEurope, the pan-European employers' group, has submitted to EU leaders that its members need "cost-competitive energy prices to enable companies to compete globally".

²⁶ Munich-based Wacker Chemie AG has greatly expanded its activities in China. Investments in China to date come to around € 500 million; this figure is set to exceed € 600 million in the next four years. Wacker's Zhangjiagang and Nanjing sites produce silicones, dispersions and dispersible polymer powders.

governments tend to act in cahoots with domestic organised interests. Cumulative interventions distort prices, rigidify economies, and make public and private actors more resistant to adjust to external change. The predictable corollary is a "fear of trade" and the resort to import protection. Thus "protectionism is the inherent logic of the redistributive state working itself out externally"²⁷. Studies have also shown that there are no positive effects from industrial policy on productivity²⁸, while the gains in competitiveness are usually transient and co-terminus with the duration of the AD duty imposed. Thus, while it is laudable that some countries have begun modernisation of their national trade defence instruments (like the EU²⁹), the modernisation exercise should take into consideration the fact that in the era of GVCs, use of traditional trade defence measures may become difficult. Forward looking reforms thus should look into design of new trade defence rules and disciplines necessary to underpin the GVC production and trade, at both national as well as at multilateral levels.

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²⁷ Jan Tumlir, the GATT's long-time in-house philosopher, accounting for twentieth-century protectionism.

²⁸ This is an important limitation. For industrial policy to be more than just a type of welfare policy, it must be shown it has a permanent effect on productivity.

²⁹ MEMO/13/319: The European Commission has made a proposal that aims at adapting the EU's rulebook to tackle unfair competition from dumped and subsidised imports to the contemporary challenges facing the EU's economy. The proposed changes would make the EU trade defence work better for all stakeholders, including both EU producers and importers. The Commission proposes improvements in six priority areas identified early in the revision process: Increased transparency and predictability; Fight against retaliation; Better effectiveness and enforcement; Easier procedural cooperation; Optimisation of the review process; and Codification of certain practices in the legislation.

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