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SALIENT GREEN: BUSINESS POWER AND TRADE POLICY RESPONSES TO CHINESE SOLAR IMPORTS

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Abstract

Markets for renewable energy technologies have globalized rapidly over the past decade. At the same time, a series of bilateral and multilateral trade disputes have emerged in solar photovoltaics (PV) and wind technologies. The emergence of these disputes is puzzling. Renewable industries are increasingly dispersed globally, tying domestic firms into global value chains, reducing the economic gains from protection and undercutting industry support. Why, then, have governments in the European Union and the United States pursued trade remedies? In this paper we focus on the solar photovoltaic industry, arguing that public interest in presented an opportunity for policymakers to pursue their own interests in trade protection. The salience of solar among the public, coupled with policymaker's own interests, led to a narrow coalition of business interests achieving their preferred policies. We examine our argument through a comparative case design centered on European Union, German, and U.S. responses to the rise in Chinese solar exports. Our findings suggest that rather than decreasing the likelihood of protection, the political salience of industries can increase the likelihood that narrow business interests achieve high rents through the pursuit of protective measures.

Key Words: solar photovoltaics, trade politics, climate change

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1. Introduction

Markets for renewable energy technologies have globalized rapidly over the past decade. At the same time, a series of high-profile bilateral and multilateral trade disputes in solar photovoltaics (PV) and wind technologies have emerged (Lewis 2014, Wu and Salzman 2014). The remedies pursued through these conflicts are designed to protect domestic firms, but come at the cost of slowing down the diffusion of renewable energies.

The decision of governments to pursue trade sanctions in renewables industries is puzzling. In renewable technologies, as across large swathes of manufacturing, industries are increasingly characterized by spatial dispersion globally, and vertical specialization. Theoretically, we expect the influence of industry on trade policy to fall as intra-industry firm heterogeneity increases. Consistent with this, research shows that the mean level of trade protection is lower in industries with highly fragmented value chains, and thus heterogeneous firms interests (Baldwin 2010, Gawande, Hoekman et al. 2014). So how can we explain the phenomenon of renewables protectionism? And what does this tell us about the political economy of green industries?

In this paper we focus on the case of protectionism in solar photovoltaics, the largest renewable energy source in terms of installed capacity. We argue that the provision of protection in the solar photovoltaic industry can be explained by the effect of public salience on policymaker interests. Rather than limiting the influence of narrow business interests, we find that public interest in solar photovoltaics gave policymakers

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an opportunity to prosecute a trade case in an effort to highlight perceived unfair trade competition across a range of sectors. The salience of solar among the public thus enabled a narrow coalition of business interests to achieve their preferred policy outcome, despite opposition from the majority of industry, non-government organizations, and others.

We examine our argument through a comparative case design centered on European Union, German, and U.S. responses to the rise in Chinese solar exports. These cases are important in their own right: solar photovoltaics are by far the largest non-hydro renewable technology globally. The case of renewables protectionism in solar photovoltaics also offers useful variation in the key independent variable of policymaker preference, while holding other theoretically relevant variables constant (Gerring and Searight 2008). Taken together this allows us to examine how the independent preferences of policymakers interact with policy salience and business power to produce different public policy outcomes.

Our argument contributes to both theory and policy. An increasing number of studies—centered on the case of the financial sector—are refocusing attention on factors that increase or weaken the structural power of business (Hacker and Pierson 2002; Culpepper and Reinke 2014). In particular, studies suggest that policymakers are more likely to respond to lobbying when industry is unified, and when lobbying occurs over issues that are not salient with the public (Culpepper 2010; Pagliari and Young 2014).

Our findings suggest, however, that the salience of industries with the public can *increase* the likelihood that narrow business interests achieve disproportionately high rents. This matters particularly in the case of renewable technologies—an important new area of international political economy—which tend to be highly salient among the public given increased interest in climate change (Hughes and Lipscy 2013). More generally, our findings support the contention of Woll (2007) and others that ability of business to obtain its preferred policy outcome is conditioned not only by the resources available to it, but also the independent preferences of policymakers themselves. Indeed, to the extent that changes in patterns of production are leading to increasingly heterogeneous business interests, this suggests that the structural power of policymakers, not business, may be increasing by changes in the structure of production globally.

In policy terms, our research also identifies a "green dilemma", in which the high salience of renewable industries renders them more susceptible to trade disputes that can slow investment and market development, thus undermining efforts to mitigate climate change. Our findings thus support a case for a more considered treatment of green technologies to avoid a string of trade disputes in the future as these industries continue to grow in scale and production becomes increasingly dispersed globally.

The article proceeds as follows. First, we discuss alternative explanations and develop our argument on the role of issue salience and policymaker interests in the provision of trade protection. Second, we provide a brief overview of shifts in the global trade of solar PV, and discuss the data sources and methods used in the empirical section of the paper. In a third step, we examine three cases—the provision of trade protection in the EU, Germany's preference for no trade measures and the supply of trade protection in the US. We conclude by flagging the implications of our findings for the political economy of trade literature and for the policy debate on green industries.

2. Business Power and Issue Salience in Green Industrial Politics

Business interests are central to the study of the international political economy. Firm investment creates jobs and generates tax revenues, both of which matter to policymakers (Przeworski and Wallerstein 1988). Reflecting this, scholars demonstrate how business shapes policy outcomes in a variety of issue-areas such as climate policy, social policy, and banking regulation (Newell and Paterson 1998, Hacker and Pierson 2002, Culpepper and Reinke 2014).

Theory and evidence propose a conditional relationship between industry preferences and policy choices. Industries with higher levels of market concentration are expected, for example, to be more politically influential, given the lower costs to collective action they face compared to firms operating in less concentrated industries (Olson 1965). Recent studies suggest that the power of business is also conditioned by *issue salience*. Most notably, scholarship demonstrates that business is more likely to achieve its preferred outcome when a policy issue is less salient with the public. When an issue is more salient publicly, on the other hand, then political representatives have a stronger incentive to incorporate the policy preferences of voters in the design and

implementation of policy, thus weakening the influence of narrow business interests (Culpepper 2010). Issue salience is thus argued to alter the structure of bargaining in public policy, with higher degree of issue salience with the public associated with the reduced influence of particularistic business interests.

The rise of protectionism in the renewables industries is puzzling given these expectations. The proposed relationship between issue salience and business power suggests that the renewables industry should be a sector in which the conditions for business to exercise power are not present. Yet in the solar photovoltaic industry—in particular—evidence shows that in Europe and the United States a narrow set of business interests succeeded in achieving their preferred outcome, despite the high level of salience with the public, and divisions among industry. Renewables sectors such as solar photovoltaics, have also been transformed by the emergence of global value chains and vertical specialization, leading to conflict among producers, and between manufacturers and upstream and downstream firms (Meckling and Hughes 2015). Why then, did the EU and US governments provide protection? And why did minority business interest obtain their preferred policy outcome?

In this paper we argue that the exercise of business power in the solar photovoltaic industry emerged because of the effect of issue salience on the political choices made by policymakers. In particular, we propose that rather than reducing business influence, the salience of solar photovoltaics among the public *increased* the likelihood that a narrow segment of business interests were able to achieve their preferred policy outcome.

The relationship between the public salience of issues and policy choices is an area of ongoing debate (Hojnacki et al. 2012). Evidence supports the contention, however, that high levels of public salience can reduce the relative influence of industry on policy outcomes. Thus shocks or scandals can elevate the salience of issues, giving policymakers an incentive to pay greater attention to public opinion, and correspondingly less attention to narrow interests (Baumgartner and Jones 1993). Oil price volatility in the 1970s, for example, increased the salience of energy policy in the United States, and gave policymakers an incentive to respond (Lowry and Joslyn 2014). Conversely, and consistent with this proposition, technical regulatory issues are more likely to be

influenced by narrow business interests precisely because they fail to capture the imagination of the public. Witko (2006) finds evidence in support of this by showing that Political Action Committees (PAC) tend to influence congressional voting on non-ideological/non-visible issues.

The focus of research into the role of issue salience examines how salience shifts the groups policymakers pay attention to when designing and implementing policy. If we characterize policies as being produced in a political marketplace, however, then we can distinguish between the demand-side of policymaking – represented by the demands industry and other groups place on policymakers – and the supply side – characterized by the ideological predispositions of individual legislators, the effects of political institutions, and other factors. Given this distinction, focusing on the effect of salience on the relative importance of different groups' demands on policymakers ignores a second channel through which issue salience may affect policy outcomes. Just as the importance of an issue with the public *constrains* policymakers by changing the relative importance of voices policymakers are required to listen to, it is also plausible that more salient issues represent an *opportunity* for policymakers.[1]

We propose that the salience of the solar industry among the public affects policy outcomes through a second channel by changing the supply side of the policy marketplace. While some level of industry demand for trade protection is necessary – often for legal reasons – to initiate the trade case, the high salience of the solar sector also gave an incentive for policymakers to use the issue in order to pursue their own interests. Instead of limiting the influence of industry by forcing policymakers to incorporate public opinion, high levels of salience thus enabled a narrow set of business interests to achieve their preferred outcome, despite divisions within the industry itself. In this way a small number of firms secured disproportionately high rents to firms because their interests were aligned with those of policymakers. It is only by understanding the conditional effects of high issue salience on the behavior of policymakers that we can explain outcomes in the solar photovoltaic market.

3. Protectionism in the Global Solar Photovoltaic Market

Few industries receive as much media coverage as renewable energy. Interest reflects public concern about climate change, and the large sums invested by governments in mitigating the risk of catastrophic climate change and adapting to changes in the physical environment. Indeed, in the wake of the 2007 global financial crisis governments invested hundreds of billions of dollars in fiscal stimulus measures, and a large share of these funds were allocated to so-called "green-growth" industries (HSBC, 2009).

The salience of renewables industries is reflected in media interest in green protectionism. Increasingly, governments are initiating trade cases in multilateral forums, alleging unfair subsidies, product dumping, and other measures that increase the share of renewables technologies, but only at the expense of domestic firms and industries (Lewis, 2014). The goal of climate change mitigation thus conflicts with the broader economic goal of governments in promoting employment and economic growth for their citizens.

This is also the case in solar photovoltaics. The solar industry makes up the largest share of non-hydro electricity generation globally. The entry of Chinese manufacturers into the solar panel industry, in particular, transformed the distribution of production in the global solar market. Chinese firms' annual photovoltaic (PV) production increased from 128 to 10,852 megawatts (MW) between 2005 and 2010. Between 2006 and 2012, Chinese manufacturers captured 60 percent of the global module market (European Photovoltaic Industry Association 2013). Europe's share of global production shrunk to 11 percent, Japan 5 percent and the United States 3 percent by 2012. Among the top 15 producers in 2012, 9 were from China, 3 from the North America, 2 from Japan and 1 from Europe.[2] The increasing globalized and vertically specialized structure of the PV industry led to a significant increase in cross-border trade in solar goods: in 2006-08 the solar industry had a trade intensity of 60 to 90 percent, compared to a trade intensity of 10 percent in the market for wind technology (Kirkegaard et al. 2010). While China also rapidly increased domestic installations of PV, a large number of the PV modules produced in China are exported (Deutsch and Steinfeld 2013, 7). As a result, the major PV markets have experienced rapid rises in imports of PV modules from China.

How did governments in major solar photovoltaic markets respond to this change? Evidence shows differences in government responses. Among these, governments in the European Union and the United States supported measures designed to protect domestic firms. The German government, on the other hand, opposed calls to protect domestic firms.

In Europe, the European Commission pursued both anti-dumping and anti-subsidy investigations. It first adopted provisional import duties before moving to a settlement that included a minimum price and import limits. On June 4, 2013, the European Commission announced provisional import duties of 11.8 percent, raised to 47.6 percent for the majority of firms if parties did not achieve an agreement by August 6 (European Commission 2013). Following the announcement of provisional measures, the European Commission and the Chinese Ministry on Commerce, together with the Chinese Chamber of Commerce, negotiated a price undertaking, which was announced on July 27.

Germany opposed the provisional trade measures by the European Commission. As we will demonstrate, the EU's shift from provisional duties to a negotiated settlement is largely a result of German opposition.

In the United States, two cases unfolded—in 2011-12 and 2013-14 respectively, both leading to unilateral tariffs. Following anti-dumping and anti-subsidy investigations, the U.S. Department of Commerce (DoC) set preliminary unilateral tariffs on Chinese module imports in May 2012. The ruling left the possibility open that Chinese manufacturers import modules assembled in China with cells from Taiwan. That led to a second case. In May 2014, the DoC expanded the scope and the level of duties.

Table 1: Comparative Trade Policy Responses in Major Solar Markets

Country	Initial Outcome	Final Outcome
EU	Unilateral tariffs	Negotiated settlement
Germany	No measures (position)	No measures (position)
US	Unilateral tariffs	Unilateral tariffs

In the empirical section that follows we examine how policymaker interests, political salience, and business interests, combined to produce these policy outcomes. We conduct three case studies, shown in table 1, focused on the European Union, Germany, and the United States. Cases were selected both because they are major solar markets and therefore important empirically, and because they offer useful variation in the independent variable. The three cases share the parameters of divided business interests and high salience. They show variation with regard to policymaker interests vis-à-vis trade protection. We identify either policymaker "support" for or "opposition" to the supply of tariffs. This allows us to examine the explanatory power of our argument that high political salience combined with policymaker interests in trade protection can lead to high rents for small factions of industry.

1) EU and US cases (policymaker support): In both cases the European Commission, and the US government, provided trade protection to domestic solar PV module manufacturers despite the majority of industry demanding open trade. We introduce evidence to support the contention that high political salience, coupled with independent policymaker support for trade remedies, led to the outcome described.

The US case replicates the finding in another major case, increasing our confidence in the results. It also allows us to address a plausible alternative explanation for outcomes in the EU case which focuses on the fact that the European Commission is more likely to pursue its own interests than a national government. The reason might be that the Commission is less subject to voter control than a national government, and less directly dependent on tax revenues and job creation through the private sector. The political system of the US makes policymakers arguably highly receptive to business demands (Gilens and Page 2014). As such, the US is a hard case for demonstrating the prevalence of policymaker interests in high-salience trade cases, adding confidence to the findings.

2) Germany case (policymaker opposition): In contrast, policymakers in Germany supported open trade in the EU-China solar case. While the solar PV industry was of high political salience in Germany as well, German policymakers had no interest to bring a major trade case against China.; the high level of trade with China meant German policymakers did not want to risk fallout from seeking trade remedies against solar

manufacturers based in China. The high salience of a case is thus a necessary condition for trade protection in the absence of strong business demand, but that policymaker support is the sufficient condition. At the EU level, the German position ultimately contributed to the settlement between the EU and China.

The salience of an issue matters because it can affect the behavior of policymakers (Epstein and Segal 2000). Salience has been defined as "how much the average voter cares about (an)…issue, relative to other issues" (Culpepper 2011, 7). In measuring public salience we follow Culpepper's (2011) strategy to use newspaper coverage as a proxy for the political salience of an issue across countries. In the EU case, the challenge is that no EU-wide newspapers exist.[3] We therefore approximate issue salience by examining news coverage in three key member states, France, Germany, and the United Kingdom. For each country, we chose the main business newspaper, using either Factiva or LexisNexis to identify the number of publications.

In addition to salience, we are also interested in the policy preferences of both firms, and policymakers. Data to identify firm and policymaker preferences were drawn from position statements issued by industry associations and individual firms, press releases, industry journal publications, and secondary sources. In addition, the authors conducted more than thirty semi-structured interviews with senior executives, senior policymakers and experts in Europe, Japan, and over the telephone.[4].

In each empirical case we are interested in identifying the relationship between the preferences of business, issue salience, and the independent preferences of policymakers, combined to determine the position taken by the European Commission, and the German and U.S. governments. We also briefly describe policy outcomes in each case. We use two methods to examine the explanatory power of our argument: process-tracing and counterfactual analysis (George and Bennett 2004, Betsill and Corell 2008). Data from each empirical case is introduced as follows. We begin by discussing business interests, before moving on to consider the salience of the solar industry relative to other sectors. We then discuss how individual policymaker interests influenced the outcome, enabling a small, narrow group of firms to obtain their preferred policy outcome.

4. The European Union: Provisional Tariffs and a Negotiated Settlement

On June 4, 2013, the European Commission announced that it would levy provisional import duties of 11.8 percent on a number of companies producing solar photovoltaic products in China and importing them into the European market, raised to 47.6 percent for the majority of firms if parties did not achieve an agreement by August 6 (European Commission 2013). Following the announcement of provisional measures, the European Commission and the Chinese Ministry on Commerce, together with the Chinese Chamber of Commerce, negotiated a price undertaking, announced on July 27. The negotiated settlement established a price floor of 56 cents per watt and a total annual import limit of 2,000 GW. This was the result of both an anti-dumping and an anti-subsidy proceeding of the European Commission. In December 2013, the Commission confirmed the negotiated settlement as its final response to the anti-dumping and anti-subsidy proceedings. Why did the European Commission set provisional tariffs? Why did it shift to a price undertaking?

Industry Demands

One possibility is that the European solar industry was unified in successfully seeking redress. Data shows, however, that the European solar industry was split over how to respond to Chinese solar imports. Intra-industry disagreement was sufficient to paralyze the major industry body, the European Photovoltaic Industry Association (EPIA).[5] As a result, EPIA took a neutral position in the trade dispute in a statement released in response to the imposition of provisional anti-dumping duties on imports of solar panels, wafers and cells from China: "As the voice of the global solar photovoltaic industry in Europe, EPIA has maintained a neutral position in this case (and in other pending trade cases affecting the sector). This decision to impose provisional duties intervenes in a context of shifting market dynamics and production overcapacity, which led to an intense global competition" (European Photovoltaic Industry Association 2013b; European Union 2012). The German Solar Industries Association (BSW) similarly remained neutral.

As a result of industry divisions within the umbrella association, ad hoc alliances and sectoral trade associations represented the different sets of interests. Three interest

groups were key (see table 2). The European Commission's investigation included consultations with these three groups, as is reflected by the Commission's report on the investigation (European Commission 2013). As we show in detail in a previous article (cite working paper), the divisions within the European solar PV industry are a result of how individual firms are positioned in global value chains. In particular the type of vertical specialization and the extent to which firms are linked into supply chains that incorporate Chinese cell or module production matter. Module manufacturers without any supply chain ties to China were the only supporters of trade protection.

Table 2: Trade Associations in EU Case

	Policy Position		
	Support	Oppose	
Organization	EU ProSun	VDMA PV	AFASE
Membership No.	20-40	49	>800
Industry Segment	Manufacturing	Upstream equipment and tool manufacturers	Downstream project developers and installers

The EU ProSun alliance represented the proponents of tariffs, module manufacturers without ties to the Chinese solar PV industry. SolarWorld established the lobby group EU ProSun, which included over 20, mostly anonymous, producers (Chaffin 2012). On July 25, 2012, EU ProSun filed a complaint with the European Commission that Chinese importers were selling solar modules and key components (i.e. cells and wafers) under market value.[6] The EU officially launched an anti-dumping investigation on September 6, 2012 (European Commission 2012b). Shortly thereafter, on September 25, 2012, EU ProSun filed a complaint about illegal subsidies to Chinese solar manufacturers, which led the EU to initiate an official anti-subsidy investigation on November 8, 2012. According to Milan Nitzschke, head of the group, it has 40 supporters, of which 25 participated in the complaint; five of those are Germany-based (Pauly and Amann 2013).

The Alliance for Affordable Solar Energy (AFASE) was the most vocal voice of the opponents. It was founded in March, 2012. It initially represented more than 70 companies, primarily downstream firms involved in project development and installation.

By the time it merged with the Sustainable Energy Trade Initiative (SETI Alliance), a public-private group promoting free trade in clean technologies in December 2013, the alliance had more than 800 supporters. Our data shows that AFASE mostly represented the interests of downstream firms: 190 of our sample of 275 firms, or 72 percent out of a total membership of 856 if we extrapolate from the sample to the population, are confirmed downstream actors. A second set of firms were wholesalers of solar equipment and manufacturers that provided peripheral equipment for the installation of PV panels such as mounting systems. In the early stage, the organization received strong support from Chinese manufacturers including Trina, Yingli und Suntech (Beetz 2012).[7]

The proponents and opponents of trade protection contested which segments of the value chain generated more economic value by commissioning expert studies. Data from EPIA, the umbrella association that stayed neutral, however, suggests that the upstream and downstream segments, i.e., those that opposed trade protection, accounted for 67 percent of the economic value creation of the European PV market in 2012 (European Photovoltaic Industry Association 2012).

Economic globalization—in particular vertical specialization—led to divisions with the European solar PV industry as regards trade policy, complicating collective political action. In such a case of business conflict, we would expect that those segments of industry that have greater structural power—i.e., they provide greater tax revenues and/or create more jobs—would have more influence in shaping policy outcomes. As shown above, the opponents of trade protection—upstream equipment manufacturers and polysilicon producers and downstream developers and installers—are considered to have been contributing two thirds of the value of the EU PV market at the time. They favored open trade with China, but the European Commission decided to provide trade protection.[8] This resulted in high rents for the structurally weaker business interests, solar module manufacturers. It also runs counter to the overall trend toward trade liberalization in industries with highly fragmented value chains (Gawande, Hoekman et al. 2014). Beyond the downstream segment, upstream firms—such as polysilicon and tool manufacturers—opposed trade protection.

Political Salience

Why, then, did the European Union pursue sanctions against China-based producers? We argue that the division among industry did not stop this outcome because policymakers at the European level used the political salience of the case to pursue their own interest in pursuing a trade case against China.

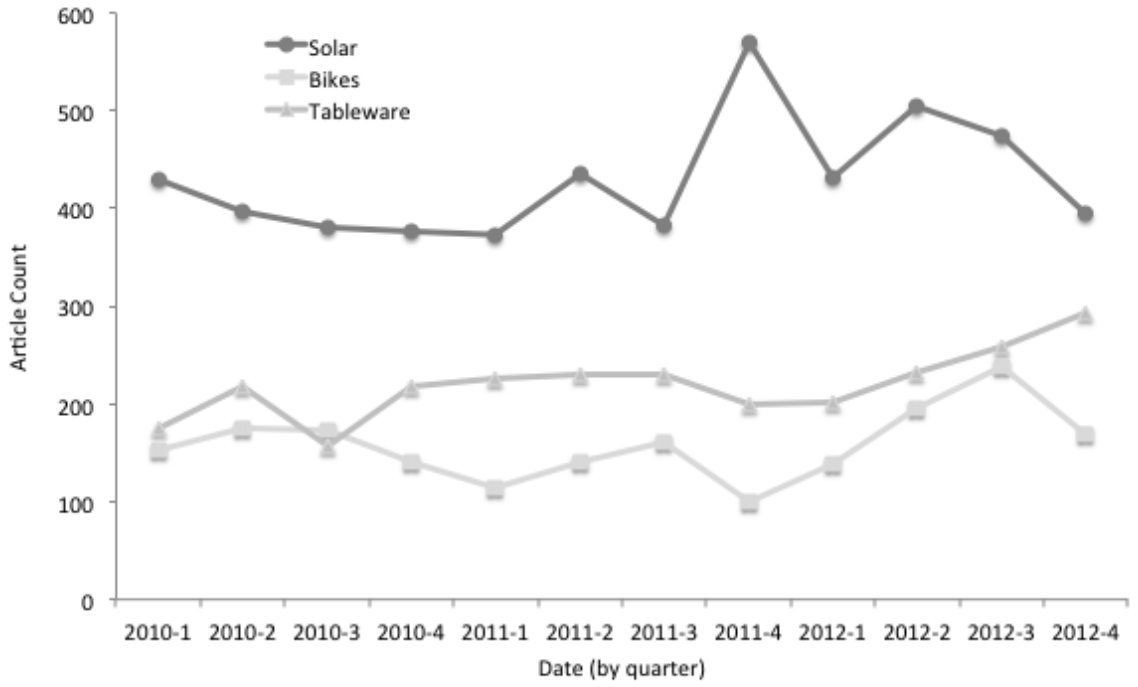
We measure the relative salience of the solar PV case in comparison to trade cases on bikes and tableware, two other major cases that the European Commission investigated against China under the second term of Manuel Barroso, President of the European Commission, and before the solar PV case was launched. Those cases were selected on the basis of two criteria: (1) being consumer products and (2) having large economic stakes. Interview data suggests that these two criteria constitute salient trade cases.[9] We, therefore, decided to control for the two product characteristics, to be able to measure the relative salience of trade cases on consumer products with high economic stakes.

Consumer products are likely to have greater political salience than industrial goods, as voters are familiar with the products. The more consumers know about the product, the more likely it is they are interested in the case, which again shapes press coverage and the extent to which policymakers consider the public interest. The selected cases also displayed large trade volumes, indicating economic significance. This is based on the assumption that the higher the economic stakes of a trade case, the greater its salience. We selected cases from the list of EU-China cases that the European Commission investigated under the second term of the Barroso Commission (2010-2012) and before the solar PV case. The rationale is that policymaker interests to bring a major case against China are likely to have been constant over that time period, as both the Commission President and the Trade Commissioner did not change over the three cases. The two comparative cases are the anti-subsidy case on bikes and the anti-dumping case on tableware, which were both initiated in 2012.

As figure 1 below shows, in comparison to the trade cases on bikes and tableware, the solar PV was two to four times more salient as a product/industry than bikes and tableware. We find that solar photovoltaics recorded a mean of 429 mentions per quarter across the three selected newspapers. In contrast, mentions of tableware and bikes

showed a mean of 220 and 158 per quarter respectively.

Figure 1: Public Salience of Selected EU-China Trade Cases, 2010-2012



Data: Les Echos, Handelsblatt, Financial Times.
Note: Search words used for media counts as follows. Solar (France: "solar" or"photovoltaique "; Germany "solar" or "photovoltaik"; UK "solar" or "photovoltaics"). Bicycles (France: "vélo" OR "bicyclette"; "Fahrrad" OR "Fahrräder"; UK "bicycle" OR "bike"). Tableware: "assiette" OR "vaisselle"; Germany "Teller" OR "Geschirr"; UK "plate" OR "tableware")

The analysis of political salience on the basis of media coverage is supported by evidence from interviews. Apart from being a consumer product and a large industry with a trade value of 21 billion euro (Fontanella-Khan 2012), the EU solar PV industry was on the mind of the public because of policy debates on climate change and the feed-in tariff, interviewees suggested.[10] This speaks to the idea of the "availability heuristic" as a mechanism that turns issues into salient issues (Culpepper 2011). The public was aware of solar PV as a product and industry in a number of ways, including through direct use as a consumer product (rooftop installations) and surrounding policy debates. The cases on bikes and tableware lacked those additional attributes. In fact, interviewees suggested that only telecommunications, which was a likely candidate for a trade case, rivaled the solar PV industry in terms of political salience.[11] However, the solar PV case was raised earlier by industry than the telecommunications case.

In sum, the solar trade case was of very high political salience in the EU. The high salience of the case shifted it from technocratic policymaking to high politics. The high salience of the solar case did not automatically lead to the provision of trade protection. It rather presented an opportunity structure to policymakers who had their own interest in providing trade protection. The different policy positions of the European Commission and Germany respectively in the EU-China solar case reflect this: salience increased the number of players involved, but it the preferences of policymakers, rather than other interest groups, that were affected.

Policymaker Interests

As mentioned, we have two questions to answer: Why did the EU provide trade protection to module manufacturers in the form of provisional tariffs in the first place? Why did the EU shift from unilateral tariffs to a minimum price and import limit as the final trade measure? We argue that the answers to those questions have much to do with the interests of policymakers in the European Commission and key Member States respectively.

As demonstrated above, the Commission's supply of provisional tariffs does not reflect the actual balance of industry demands. It suggests that other interests than firm interests shaped the policy outcome. This is challenging to demonstrate given the secrecy of trade investigations. They are designed as apolitical, technocratic processes that assess industry data bottom-up. We use counterfactual analysis and data obtained from interviews to investigate how the Commission's interests shaped the political outcome.

First, the fact that the Commission favored trade protection, while Germany, home to the large majority of the EU's solar industry, rejected it, raises questions regarding the extent to which the Commission responded to industry demands. The German government benefits directly from the job creation and tax revenues of the domestic solar industry. It thus has a very strong incentive to provide the policy that maximizes the economic value of the industry. Why, so, did the European Commission conclude injury for the solar PV industry? Would it have provided trade protection in the absence of top-down policymaker interests? As two interviewees said, the technical staff in DG Trade and the Director-General of DG Trade in the European Commission, Jean-

Luc Demarty, was reportedly not in favor of taking up the solar PV case.[12] This suggests that the Commission-internal bottom-up assessment of the case concluded that open trade was the preferable option. It thus also implies that the case was likely driven top-down by policymakers that leveraged a high-salience trade case to pursue other goals.

Second, several observers suggest that the interest of Trade Commissioner Karel De Gucht was to bring a major case against China to gain bargaining leverage (Chaffin 2013a, Zhao 2014). As an EU diplomat said, "They see it as leverage with the Chinese. I think they were frustrated for many years that they didn't have any" (in Chaffin 2013c). De Gucht had been seeking opportunities for a major push against China since entering office. His goal was to level the playing field for European firms in competition with Chinese companies (Dempsey 2011). In fact, in a memo discussing the provisional solar tariffs De Gucht relates his decision on solar PV to the Commission being able to see "the 'big picture'" (European Commission 2013). De Gucht's goals thus led to a strategic approach to the solar trade case, rather than a case-sensitive approach that allowed for bottom-up analysis taking into account interests of industry and member states: "But it is his hardened view towards Beijing that have drawn the most notice and concern" (in Chaffin 2013b).

The Commission needed a major, high-salience case to push back against China, as several interviewees suggested.[13] Both solar PV and telecommunications were candidates, but the complaint in the solar PV industry was simply lodged first. We, therefore, conclude that the high salience of the solar PV industry in the eye of the European public offered the Commission an opportunity to leverage the solar case in support of its broader China trade agenda. "For Brussels, the solar case has always been about more than just the future of the solar industry. The EU has targeted the perceived 'state capitalist system' in China (Zhao 2014, 30)." Against this backdrop, the European Commission put provisional anti-dumping tariffs of June 2014. This was despite opposition from 17 EU Member States (Pauly and Amann 2013).

While the Commission set provisional tariffs, it soon de-escalated the trade dispute, settling for a minimum price and import limits with China on July 27, 2013. We suggest that the position of Germany and other Member States largely explains this shift (Chaffin 2013b), as we examine in the next section. To conclude, the EU case has

demonstrated that in situations of divided business interests and high public salience, policymakers can play the game. Surprisingly, the result can be higher economic rents for small factions of business.

5. Germany: Opposition to Tariffs and the EU's Negotiated Settlement

The importance of policymaker preferences in conditioning the political effects of issue salience is demonstrated by contrasting the response of the German government to that of the European Commission and the United States. Unlike the European Commission, the German federal government did not pursue trade protection for the solar PV industry, but actively opposed it. This ultimately contributed to the EU shifting from provisional tariffs to a negotiated settlement. But why did Germany's policy preference differ from that of the European Commission? We argue that industry demands and political salience in the German solar industry were the same as at the EU level. However, German policymakers did not have an interest in playing a strategic trade politics game with China. Their preference was to protect the broader China-Germany trade relationship.

Industry Demands

One possibility for the different outcome in the German case is that German industry was more unified than industry was at the European level. Evidence shows, however, that the German Solar Industries Association (BSW) remained neutral, similar to the European solar industry association. The BSW membership was split between opponents and proponents of trade protection, and as a result, the two factions joined the ad hoc groups EU ProSun and AFASE respectively. Indeed, SolarWorld, the founder of EU ProSun, is a German company.

In the German solar industry not only downstream firms, i.e., project developers and installers, opposed trade protection, but also upstream firms, in particular polysilicon and tool manufacturers. Within the European solar industry, those firms were concentrated in Germany. The VDMA PV, the PV branch of German Engineering Association, represented equipment manufacturers who sold tools and machines to Chinese cell and module manufacturers. The group only occasionally teamed up with

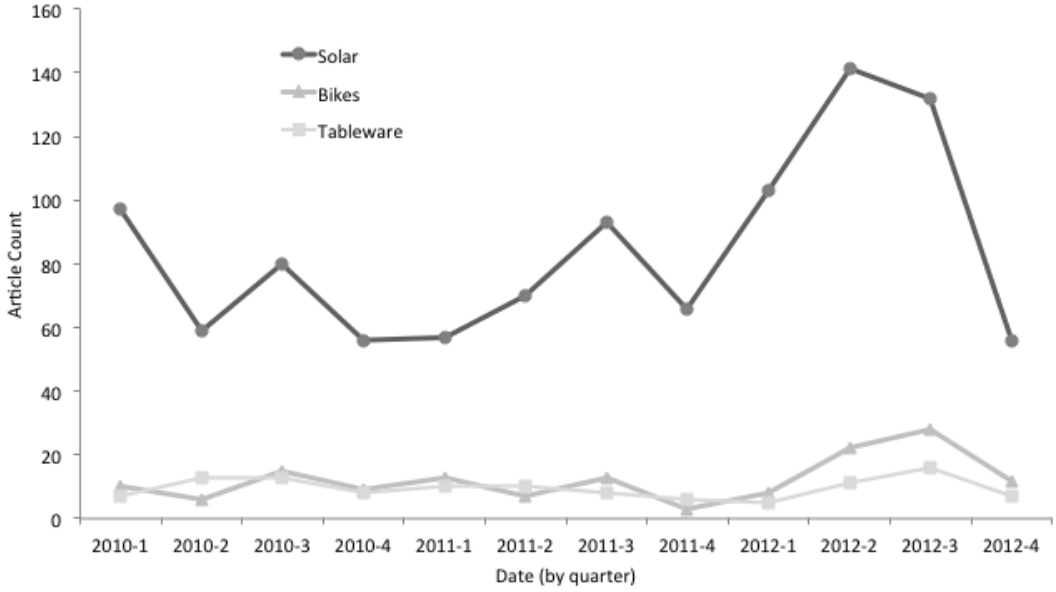
AFASE, as its mandate limited it to speaking for the specific segment and its lobbying style differed.[14] As regards raw materials, Wacker Chemie AG, Europe's largest polysilicon producer, was the only interested party. While Wacker Chemie is a German firm and VDMA PV represents German manufacturers they lobbied at both levels—in Berlin and Brussels.

Beyond the solar industry, the German Industry Association (BDI), the umbrella group of German industry, was getting increasingly vocal about the risks of potential retaliation by China in other economic sectors. Ulrich Grillo, president of the BDI, the German manufacturers' association, said: "Punitive tariffs damage both sides. We urge the government to put pressure on the Commission" (in Carnegy and Fontanella-Khan 2013). In particular the auto and chemicals industries within the BDI were vocal, observers suggest.[15]

Political Salience

Industry was thus divided in the German case, as in Europe. Our measure of issue salience also suggests that solar PV had similar levels of political salience in Germany as in the Europe as a whole. In fact, compared to bikes and tableware, our comparative EU-China trade cases, solar PV was even more salient in Germany than in the EU more broadly. We find that solar photovoltaics recorded a mean of 84 mentions per quarter in the *Handelsblatt*, the major German business newspaper. This compares to a mean of 12 and 10 mentions per quarter for bikes and tableware respectively.

Figure 2: Public Salience of Selected German-China Trade Cases, 2010-2012



Data: Handelsblatt.
Note: Search words used for media counts as follows: Solar "solar" or "photovoltaik"; Bicycles "Fahrrad" OR "Fahrräder"; Tableware: "Teller" OR "Geschirr".

The German case thus resembles the EU case in both divided industry demands and high salience of the case at stake. Why then did Germany oppose trade protection, while the European Commission favored it? And, how did Germany's position feed back into EU policy?

Policymaker Interests

The key difference between the European and German cases lies in the preferences of policymakers. In the initial phase of the solar PV case, the German representatives in the European Commission's anti-dumping committee took a neutral position—partly because the German solar industry was deeply divided over how to respond to Chinese solar module imports (Pauly and Amann 2013). Germany remained undecided on what position to take though Chancellor Merkel had publicly called for a negotiated solution as early as August 2012 while on a visit to Beijing (Peel and Chaffin 2013). The division within the solar industry was reflected by inter-agency conflict in the German government. The Federal Ministry for the Environment was somewhat in favor of EU ProSun's case, whereas the Federal Ministry of Economic Affairs rejected the idea

of a trade dispute over solar PV.[16]

By May, 2013, the German government had, however, shifted to officially oppose tariffs. Rösler warned that the imposition of anti-dumping duties on solar imports from China would be a "grave mistake" (Peel and Chaffin 2013). Along with the German government, 17 other Member States, including the UK, the Netherlands, and Sweden among others, voiced their opposition (Carnegy and Fontanella-Khan 2013). In particular the German upstream sector, including Wacker, a polysilicon producer, and the VDMA, lobbied Philip Rösler, Germany's Economy Minister and Vice-Chancellor. Wacker, Europe's largest polysilicon producer, started a full-fledged campaign against the tariffs after the Chinese threatened to retaliate trade measures against panels with trade measures against polysilicon (Chaffin 2013a).[17] At the same time, major solar manufacturers—including at least one of those backing the anti-dumping complaint—went bankrupt, as the government was developing a position. It questioned a case for protective measures for an industry that looked increasingly hard to save in any case.

In addition, China is Germany's most important export market in Asia. In 2012, Germany sent exports worth 66.6 billion euro to China, while imports from China amounted to 77.3 billion euro (Bryant 2013). As noted above, the BDI, the Federation of German Industries, voiced its opposition to tariffs in the solar industry given the risk of trade retaliation. That risk seems to have become apparent in a meeting between Chancellor Merkel and President Li Keqiang. On May 30, the German government officially informed the Commission that it opposed the tariffs, as did another 16 member states. The Commission caved in to pursue a negotiated settlement, as it required the support of Member States for the final duties.

At the EU level, pressure from Member States such as Germany to de-escalate the dispute converged with the willingness of Chinese importers to settle and a partial re-thinking in the European Commission. The notion of a minimum price appealed to in particular large Chinese importers, as it guaranteed them a certain profit margin. It was certainly preferable to duties (Chaffin 2013b). They were thus willing to support a settlement between the EU and China. What is more, as some interviewees suggested, the European Commission itself became interested in de-escalating the dispute, after realizing how salient it actually had become in China.[18]

The EU's early shift to an undertaking thus appears as the result of a battle between the German position—protecting the broader trade relationship with China—and the European Commission's interest—instating a case against China. This reflects a larger pattern in European trade politics, with Member States undermining a unitary trade policy (Evenett and Vermulst 2005). The different positions of the European Commission and Germany demonstrate that high salience does not directly result in policymakers responding to the broader public interest. High salience may be conceptualized as an opportunity structure to mobilize broad public support for a course of action that meets policymaker interests. The European Commission had its own reasons to respond to public interest, while the German government responded to broader industry demand.

6. The United States: Unilateral Tariffs and Tariff Expansion

The US-China dispute over imports of solar cells and modules follows a similar causal pathway as the European case. It thus functions as a confirmatory case in our comparative research design, producing similar outcomes to the European case, and contrasting outcomes with the German case. In terms of outcomes, in October 2011, the US subsidiary of the German solar manufacturer SolarWorld and six allies in the Coalition for American Solar Manufacturing (CASM) submitted a petition to the US Department of Commerce (DOC) and the US International Trade Commission (ITC), claiming that the Chinese producers were dumping solar cells and modules on the US market to gain market share (Gifford 2011). As described below, this petition was not supported by the industry as a whole. On October 27, the ITC initiated anti-dumping and countervailing duty investigations (Office of the Federal Register 2011).

In December 2011, the ITC unanimously found that US producers were injured by Chinese cell and module imports (International Trade Administration 2011). The DOC then investigated the extent of injury. In March the following year the DOC set preliminary tariffs for cell and module imports from China after it found that the Chinese government subsidized Chinese producers unfairly (International Trade Administration 2012b). Two months later, in May 2012, the DOC also found that Chinese producers were dumping solar products on the US market and increased tariffs (International Trade Administration 2012a). The DOC published its final determination in the Federal

Register in October 2012.[19]

In December 2013, SolarWorld submitted a second set of anti-dumping and anti-subsidy cases with the DOC and the ITC against China and Taiwan (Meza 2014). It claimed that this was to close a loophole in the outcome of the first trade case. Under the first trade measure, Chinese producers could import modules assembled in China from cells manufactured in third countries, notably Taiwan. In May and June 2014, the DOC set preliminary tariffs based on affirmative countervailing subsidy and anti-dumping investigations respectively (International Trade Administration 2014). The tariffs thus expanded the tariffs resulting from the first set of cases (Wingfield 2014).

Industry Demands

As in the European and German cases, the solar industry was divided over how to respond to the rise in imports from China.[20] The Solar Energy Industries Association (SEIA), which has a broad based membership encompassing both vertically integrated and segmented firms, as well as firms headquartered in the United States and elsewhere, remained neutral in the initial 2011 US-China trade case, and advocated for a negotiated settlement in the second 2013 case. SEIA President and CEO Rhone Resch argued that "litigation is a blunt instrument and, alone, incapable of resolving the complex competitiveness issues that exist between the U.S. and Chinese solar industries. It's time to end this conflict and negotiations must play a role." (Meza 2014)

In contrast, supporters of protection - spearheaded by SolarWorld America - created the Coalition of American Solar Manufacturers (CASM) (Mufson 2011). It originally represented seven US cell and panel manufacturers, of which only SolarWorld, Helios USA and MX Solar USA are officially known. Over the course of the two US trade cases, CASM grew to include a range of downstream firms. As of November 2014, the group had 256 official members.

Opponents of trade measures, on the other hand, established the Coalition for Affordable Solar Energy (CASE) in November 2011 in response to the creation of CASM (Stuart 2011). The broad alliance represented project developers and installers as well as some Chinese importers. Next to CASE, Semiconductor Equipment and Materials International (SEMI), the global industry body of manufacturers in the micro- and nano-

electronic industries, opposed the trade case. In the solar case, SEMI represented in particular the interests of toolmakers and polysilicon producers. SEMI identifies 178 members to belong to the solar equipment industry.

While thee three groups were the key collective voices of the different industry fractions, a number of large firms were also politically active individually. This applies in particular to large upstream equipment and polysilicon manufacturers.

Table 3: Key Trade Associations in US

	Policy Position		
	Support	Oppose	
Group	CASM	SEMI	CASE
Membership	Originally 7 (256 in 2014)	178 (solar-related members)	94
Industry segments	Manufacturers (+ downstream)	Upstream equipment and polysilicon producers	Downstream project developers, Third-party leasing firms, installers

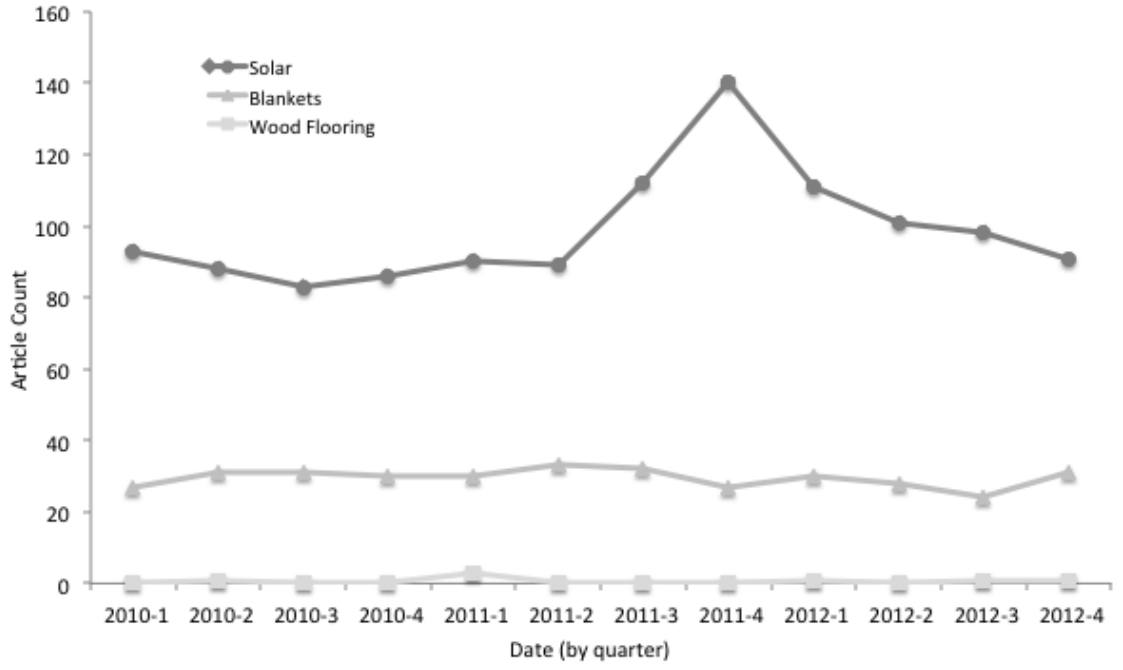
Political Salience

The Energy Policy Act pursued by the Bush Administration focused on an "all of the above" strategy in the energy sector, offering subsidies for oil and natural gas production, but also providing benefits to agricultural for increasing biofuel production and tax credits for renewable energy production. The Obama Administration continued with this approach, but placed greater emphasis on renewable energy sources by setting a target of 80 percent of power generation from renewable energy by 2035 (Obama 2011). The Department of Energy announced the SunShot initiative in 2011, as part of the administration's program of promoting renewable energy research, development, and deployment, with the goal of making it competitive at scale relative to other sources of energy by 2025 (United States Department of Energy 2011). Renewable energy was thus a focus for the administration within energy policy.

More importantly for our theory, the solar industry was salient among the public,

in common with Europe. Comparing print media coverage of solar photovoltaics with other consumer products that were subject to trade investigations by the United States government against China over the 2010-2012 period using article mentions in the Wall Street Journal (morning addition), we find that solar photovoltaics recorded a mean of 98.5 articles per quarter, or approximately one per day, with a minimum of 83 mentions and a maximum of 140 mentions (standard deviation of 15.3 articles). In contrast, mentions of blankets, with woven electric blankets imported from China subject to an antidumping and countervailing duty investigation beginning in 2010, showing a mean of 30 articles per quarter, or approximately one every three days, with a minimum of 24 and a maximum of 33 (standard deviation of 2.4 articles). The *New York Times* sums up the unusual salience of the solar trade case: "By bringing together complex issues like manufacturing policy, job creation and climate change, the solar panel dispute is emerging as the most politically charged trade case in many years, potentially rivaling Detroit's legal case against Japanese automakers under a related trade statute in 1980" (Bradsher 2011).

Figure 3: Public Salience of Selected US-China Trade Cases, 2010-2012



Data: Wall Street Journal (print), various editions.
Note: Media count carried out using Factiva. Search words used for media counts were: solar: "solar" and "photovoltaics"; blankets: "blanket" or Òelectric blanket"; wood flooring: "wood floring".

Policymaker Interests

As in the EU case, the US case led to two key policy outcomes: the first dispute of 2012, which led to unilateral tariffs, and the escalation to the second dispute of 2014, which resulted in expanded tariffs. Evidence suggests that the outcome of the first dispute fits the pattern of many trade remedy cases in the US, largely as a result of institutional design. US trade law grants preference to injured interests, and does not provide for the option that policymakers weigh different industry interests and assess the net economic effect of trade protection. This differs from the EU's union interest test, and makes it more likely the US government will provide trade protection despite divided business interests. The outcome of the first US-China trade remedy case in solar PV thus did not surprise seasoned observers of US trade politics.[21] Business groups opposing trade protection interpreted the outcome as support for open trade: "We really think the Department of Commerce came down on the side of free trade," said Jigar Shah, spokesperson of AFASE (in Cardwell and Bradsher 2012). The main reason is that the outcome of the first case allowed Chinese firms to escape the duties by importing modules assembled in China with cells from Taiwan.

The escalation of the solar conflict to a second case broadened the scope and level of the tariffs, however, and this departs from usual patterns of US trade policymaking and suggests the possibility of top-down political influence. SolarWorld initiated the second case to close the above-mentioned "loophole." The company proposed that two out of three manufacturing steps of modules would need to be done in China. The Department of Commerce, however, broadened the scope of the duties to any modules that undergo final assembly in China, regardless of manufacturing origin. It also increased the duties. Experts saw this as an unprecedented move, indicating an usual level of politicization (Financial Times 2014).[22] Paula Stern (2014), former chairwoman of the International Trade Commission, sums up that sentiment: "Trade spats featuring the U.S. and China are nothing new, nor is the battle over government subsidies to Chinese solar manufacturers. What is new is the Commerce Department's move to change the rules in the middle of the game, hurting the domestic solar industry, undermining U.S. climate change goals, and risking a prolonged trade dispute at the WTO." Opponents of trade protection considered the outcome of the second case as a significant impediment to

growth in the US solar industry (Coalition for Affordable Solar Energy 2014).

Why would US policymakers have an interest in providing expanded protection to US solar manufacturing? Interviews with numerous participants and observers of the case suggest two sets of policymaker interests plausibly drove the escalation of the solar dispute, although there is uncertainty about which was more significant.

First, protectionist interests in the administration and the legislature could have pushed for the DoC's tougher stance in the second case. Obama Administration placed a greater emphasis on the development and deployment of renewable energy technologies than its predecessor, and this was supported by congress. The federal government implemented tax credits, loan guarantees, and direct subsidies designed to support the growth of the industry, as noted above. In addition, the American Recovery and Reinvestment Act, for example, which was one component of the U.S. federal government's response to the global financial crisis, included an initial commitment of 2.3 billion dollars in tax credits targeted at the solar sector (Platzer 2012, 22).

In the executive branch, the solar industry was of interest in part because of the collapse of Solyndra. Solyndra was a Californian solar panel maker that went bankrupt in 2011 despite receiving 535 million dollars in loan guarantees from the Department of Energy. The causes of the failure, and the possibility that the Office of Management and Budget within the executive played an improper role in the review of the loan guarantee, were pursued through multiple hearings in congressional committees in 2011, including the House Subcommittee on Oversight and Investigations (Committee on Energy and Commerce of the U.S. House Of Representatives 2011). Solyndra later sued three China-based solar producers with U.S. operations, claiming that unfair pricing lead to the collapse of the company (Wesoff 2012). On November 2, 2011, the day the ITC voted to institute an anti-dumping and countervailing duty investigation, President Obama said in an interview with a television reporter from Oregon, the home state of SolarWorld US and the hub of the American solar panel manufacturing industry, that there were "questionable competitive practices coming out of China" in clean energy (in Bradsher 2011). The decision to impose tariffs on imports of solar products from China was touted by Democratic leadership in the House of Representatives as "just the latest step by the Obama Administration to get tough on foreign companies who don't play by the rules"

(Coleman 2012).

The legislative branch was also interested in the solar sector. Congress responded to demand from trade unions for higher scrutiny of Chinese trade practices. On September 9, 2010, the United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied and Service Workers International Unions ("Steelworkers") petitioned the USTR under section 302(a) of the 1974 Trade Act, complaining about Chinese practices in green technologies that disadvantage U.S. manufacturers. In addition to general laws and regulations supporting China's renewable energy industry, the petition notes specific measures supporting China's wind, solar, biomass, auto, and energy efficiency industries. On September 28, 2010, congressional members Sander M. Levin, Charles R. Rangel, and Phil Hare wrote to the president asking the USTR to more closely monitor China's trade behavior by creating an office dedicated to enforcing China's trade commitments. The letter was signed by 181 members from the U.S. House of Representatives, and written explicitly in support of the Steelworkers' petition (Various 2010).

The push for action against Chinese producers in green technology industries was joined by Ron Wyden, U.S. Senator from Oregon. Wyden, Chairman of the U.S. Senate Finance Committee's Subcommittee on International Trade, Customs and Global Competitiveness, also wrote to the Obama Administration noting his willingness to "advance a legislative effort, as provided by the U.S. trade remedy laws, to ensure that the American solar industry is not harmed by unfair trade" (Wyden 2011). SolarWorld is based in Oregon, and Wyden's re-election campaign revolved around regional solar jobs. Wyden's office was involved in the trade case from the beginning; it made the introduction the law firm Wiley Rein, which represented SolarWorld in the trade cases (Kashino 2011). During the second US-China solar case, Senator Wyden spoke in support of SolarWorld at an ITC hearing in December 8, 2014 (United States Senate Committee on Finance 2014). It is plausible to assume that Wyden's position mattered disproportionately, given his key role as the chairman of the Senate Finance Committee in President Obama's broader trade agenda (Weisman 2015).

Second, it is also plausible that non-protectionist interests in the administration, notably the White House, the Office of the United States Trade Representative, and the DoC, and in the legislature led to an expansion of the tariffs. News coverage suggests that

executive-level intervention may have possibly occurred after the preliminary outcome of the second case in the summer of 2014 (Gifford 2014). Several observers suggest that the outcome of the second case might have been an attempt by the DoC to increase the pressure on Chinese producers and the Chinese government to seek a settlement with the petitioner SolarWorld.[23] In fact, US trade law allows for governments to negotiate a so-called suspension agreement in the context of an ongoing case if requested by the foreign government. China did so in the course of the second case, and the US and Chinese governments entered such negotiations (Willis 2014). They failed, however, to come to an agreement.

It remains speculation what could have motivated an interest in a settlement at the executive level and led to such a potential intervention specifically. One argument suggests that the administration had an interest in a settlement to help remove the retaliatory tariffs for US polysilicon producers.[24] An alternative plausible line of thought suggests that the White House had an interest in clearing up the trade case before the US-China climate summit in November 2014.[25]

In sum, evidence suggests a plausible case that parts of the executive branch and the legislative branch pursued their own interests that are likely to have intervened with a bottom-up, technical assessment of the trade case, which ultimately led to escalation instead of de-escalation of the conflict. Those interests may have related to either increasing protection as the primary goal or to reaching a settlement via expanding tariffs first. The specific political interests and actors influencing the outcome remain unclear. No matter the origin of influence, the outcome is the same: the US has expanded protection for solar PV.

In common with the European case, in the United States the solar case was thus pursued despite being supported by only a small share of U.S industry, and despite the public salience of the case. This is consistent with the idea that the public salience of the solar industry, rather than its economic impact, led political leaders to support the trade case against China, even though it was supported only by a minority of the industry.

7. Summary

In the three cases above we examined the causes of trade protection in the solar sector. In terms of outcomes, trade remedies were pursued at the European Union level, as well as in the United States. The German government, in contrast, rejected the demands for protection from SolarWorld and other companies. The phenomenon of protectionism in the solar photovoltaic industry presents an empirical puzzle. Data drawn from the print media confirms that the solar industry is highly salient with publics in the European Union and the United States. Data also shows that the solar industry was divided over the merits of pursuing trade remedies against the rapid rise of solar module imports from China, and that supporters of the imposition of trade barriers, and opponents, actively lobbied to try and achieve their preferred outcome. Yet despite these deep divisions within the industry, and the highly visible nature of the solar industry, policymakers in both the United States, and in the European Commission, supported the imposition of import barriers.

In explaining outcomes we proposed that the political salience of solar photovoltaics increased the likelihood of protectionism because it made it more likely to be targeted by policymakers seeking to achieve a broader set of goals. Data drawn from the comparative cases of European, German, and U.S. responses to the rise in solar imports from China provided support for our argument. Data in the European case is consistent with the argument that the salience of solar photovoltaics with the public presented an opportunity for political representatives within the European Commission to pursue a trade case against China in order to make a broader point about the trade balance between the two regions. This contrasts with the German case, in which the solar sector was equally salient publicly, but in which policymaker preferences were not aligned with the pursuit of a trade case against China. Germany thus opposed the pursuit of trade remedies against China, in contrast to the European Commission. This contributed to the shift in the EU from provisional tariffs to a negotiated settlement

The case of the United States further supports the argument, confirming the findings from the European case. The decision of U.S. authorities to pursue the case against Chinese producers, and later, escalate, was made despite the majority of the domestic solar industry opposing tariffs. One reason for this may be that in the U.S. case

it is unnecessary to test for the overall economic effect of the imposition of trade remedies, increasing the likelihood of a finding of injury in comparison to the case of Europe. Yet this does not explain the escalation of the dispute beyond the initial focus on China. The latter, in particular suggests that the solar dispute was treated unusually relative to other trade disputes given its high political salience, with independent political motivations plausibly explaining the decision to expand the case.

8. Discussion

What are the implications of these findings? Existing scholarship proposes that high levels of issue salience change the incentives of policymakers by forcing them to take into account the preferences of the public, in addition to business. Issue salience, in this account, is associated with reduced industry influence on policy outcomes. In contrast, our research suggests that political salience has a *conditional* effect on the power of business: while it may reduce the likelihood that publics ignore a given policy issue, thus enabling business interests to achieve their preferred outcome, the case of solar photovoltaics also suggests it can *increase* the incentive for policymakers to use narrow business interests in seeking to achieve their own preferred policy outcome.

More generally patterns of protection in the solar photovoltaics sector suggest two tensions in the relationship between public salience and the influence of business. First, the case of solar photovoltaics suggests that salience can be a two-edged sword. While public salience undoubtedly increases transparency, shifting the structure of bargaining to incorporate the preferences of actors other than business, it also can lead to the forging of coalitions between narrow business interests and policymakers. As a result, policy salience, when combined with the independent preferences of policymakers, may increase the probability that a narrow section of business will achieve its goals.

Second, the case of protectionism in the solar photovoltaic industry shows that the very popularity of renewable energy – and the increasing importance of China within global supply chains for renewables industries – may make them more likely to be subject to trade measures that decrease their competitiveness relative to more carbon intensive substitutes. We should thus expect an increase in trade disputes over time involving the renewables sector. Rebalancing trade policymaking in favor of green

industries thus needs to be considered an important component of climate-related public policy.

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Endnotes

[1] On environmental policymaking as a political marketplace see Keohane etal (1998).
[2] In 2012, the top 15 global PV module producers accounted for half of the 35.5 GW capacity installed that year. Yingli (China) was the largest producer, followed by Suntech (China) and First Solar (USA). See REN21 (2014).
[3] The use of media to report issue salience is recommended by Epstein and Segal (2000).
[4] Since the trade cases are very recent or ongoing, a number of interviewees offered a conversation on the basis of confidentiality. The level of confidentiality differed case by case. The specificity of attribution of interview date therefore varies throughout the article.
[5] Telephone interview with member of management team of major solar firm involved in the case, April 30, 2014.
[6] European Commission 2012a.
[7] Interview with representative of lobby group, April 10, 2014, and with member of management team of solar firm, April 30, 2014.
[8] The European Commission was not constrained by institutions in aggregating firm demands. The European Union interest test allows that trade policymakers consider the interests of non-producer firms.
[9] Telephone interviews with two anonymous interviewees, May 4 and May 23, 2014.
[10] Telephone interviews with three anonymous interviewees, May 4, May 23, and July 22, 2014.
[11] Telephone interview with member of management team of a major solar firm involved in the case, April 30, 2014.
[12] Interviews with two anonymous interviewees, May 4 and July 22, 2014.
[13] Interviews with anonymous interview partners, one of which was a member of the management team of a major solar firm involved in the case, April 30, May 4, May 7, July 22, 2014.
[14] Author's interview with representative of trade group, July 8, 2014.
[15] Interviews with three anonymous interviewees, July 8,16, 22, 2014.
[16] Interview with representative of lobby group involved in the case, April 10, 2014.
[17] Interview with anonymous interview partner April 9, 2014.
[18] Interview with anonymous interviewee, July 22, 2014.
[19]http://www.usitc.gov/trade_remedy/731_ad_701_cvd/investigations/2012/cspv_cells_and_modules/final/PDF/Solar%20panels%20CVD%20final%20determination.pdf
[20] For the purpose of our analysis, we examine the initial preferences of firms at the beginning of the trade case in the fall of 2011.
[21] Telephone interviews with two anonymous interviewees, July 21 and 23, 2015; Telehone interview with trade lawyer, July 22, 2015.
[22] Telephone interviews with two anonymous interview partners, both July 31, 2014; Telephone interview with representative from solar firm, San Francisco, August 18, 2014.

[23] Telephone interview with a senior executive of a US arm of a Chinese solar producer, July 22, 2015; Telephone interviews with anonymous interviewees, July 31, 2014 and July 23, 2015.
[24] Telephone interview with senior trade expert, July 29, 2015.
[25] Telephone interview with senior trade advisor, July 23, 2015.