Deontological and Consequentialist Preferences Towards Arms Exports

A Comparative Conjoint Experiment in France and Germany*

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Abstract

Despite fierce politicization in arms-exporting democracies, we lack systematic research on mass public preferences on arms transfers. We propose that citizens either apply a deontologist (rejecting transfers categorically) or consequentialist (trading-off economic, strategic and normative aspects) calculus of preference formation. Conducting population-representative survey experiments ($N = 6,617$) in Germany and France, two global top-5 major arms exporters, we find that 10-15% of respondents follow deontologist considerations, a preference structure potentially relevant for all foreign policies involving the use of military force. Still, a majority shows differentiated preferences, giving largest weight to normative considerations, with assessments affected by moderating features (e.g., scenarios of just war). Principled rejection of arms trade and a large consequentialist weight for normative factors are more pronounced in Germany compared to France, indicating that public opinion might pose a stronger constraint in this country. Respondents' preferences match opinion-polls on post-Russian invasion Ukraine-armament, indicating high external validity of our experiments.

Keywords: Weapons exports, foreign policy, international trade, public opinion, deontologist ethics, survey experiment, cross-national comparison

Wordcount: 10,945

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1 Introduction

When countries export arms, they deliver a very peculiar good: Economically, arms trade nourishes a sizable industry with a global turnover of \$361 billion for the 25 largest companies alone (SIPRI 2020). With respect to security, arms transfers affect both the global balance of power, but also the specific security environment of exporting and importing states (García-Alonso and Levine 2007). Normatively, arms are a coercive technology with the potential to kill, employed for ‘just wars’ as well as for aggression or suppression (Bellamy 2006). Notably, eight of the ten largest exporting countries are democracies (Wezeman et al. 2020), but to our knowledge research on the institutional and preferential preconditions of democratic accountability for this policy area is lacking.

The heated public debates in NATO countries surrounding weapons transfers¹ to Ukraine before and after the Russian invasion in 2022 provide a case in point. In a prominent example, the German government first opposed such exports categorically, but turned its position drastically after the invasion. At the same time, public opinion flipped – from about two thirds opposed to two thirds approving the transfers of even offensive weapons (see Appendix Section A.1).² As Ukrainian president Wolodymyr Zelenskyy put it: “I gladly notice that the position of Germany moves favorably towards Ukraine. And I think this is absolutely logical, given the majority of the German population supports this move” (daily video address on 10.04.2022, own translation). Hence, we propose that it

¹ As in this case, many arms deliveries are not purely commercial sales but provided subsidized as military aid. This is encompassed when we speak of arms exports in the following, and we use the terms arms/weapons export/transfer/trade interchangeably.

² While there is, to our knowledge, no scientific literature on arms trade preferences, polling agencies, as contractors of NGOs, media outlets or government agencies, at times collect citizens preferences on specific arms exports to inform current political debates. Early 2022, just before/after the Russian invasion of Ukraine, was such a time, and we identified all polls publicly accessible – indicating that public opinion is very responsive to external events, as we see a strong shift in approval with the onset of the invasion, albeit from polls of different survey companies with different question wording/sampling methodology.

is both theoretically worthwhile and practically relevant to understand public opinion on arms transfers. We thereby tie into an ongoing debate in the recent literature, indicating that citizens hold reasoned preferences on foreign policy, and that their attitudes matter for government decision making (see Appendix Section A.2).

With this article, we address three core questions: To what extent does opposition ‘per se’ prevail in mass public preferences regarding arms exports? How do citizens weigh strategic, economic and normative factors when deciding on arms exports? Do these considerations vary in two major Western arms exporting democracies, Germany and France? Theoretically, we propose that we need to differentiate two fundamental types of preference formation of citizens. First, for some, preferences could be determined by fundamental convictions. With so-called deontological motivations (Chen and Schonger 2022), citizens do not reason *under which conditions*, but *whether at all* arms should be traded. Empirical investigations of the presence of deontological preferences are generally rare, but even more so in the field of foreign policy preference formation (see for exceptions Dill and Schubiger 2020; Nincic and Ramos 2011). To our knowledge, only research on a nuclear taboo has systematically investigated whether principled objection structures citizen preferences, with some evidence pointing against (e.g. Press, Sagan and Valentino 2013; Dill, Sagan and Valentino 2022), and other evidence towards (e.g. Rathbun and Stein 2020; Koch and Wells 2021) principled preferences. We investigate whether deontologist motivations are important for arms trade as a prominent policy decision that directly relates to the use of military force, and where principled arguments are frequently put forward in public discourse. Second, for other citizens, much like governments, arms trade could constitute a multi-dimensional policy object that combines economic, geo-strategic, and normative aspects, as political economy theories argue (García-Alonso and Levine 2007). These citizens would apply a consequentialist mode of decision making, but we do

now know how they reconcile potential trade-offs between these three dimensions in their calculus. Of course, the prevalence and manifestation of these two types of preference formation could differ between countries, constraining governments to differing degrees. We therefore explicitly investigate citizen’s preferences in two divergent cases with distinct history and institutions – both global top-5 exporters of arms, but the latter a nuclear power with high geopolitical ambitions, the former with a posture of a ‘civil power’.³

Empirically, we draw on a population-representative online survey with 6,617 (voting-age) citizens, half from each country, giving us sufficient power to investigate even complex conditional relationships. We triangulate from respondents’ replies to experimental rating tasks, open-ended survey questions, and established survey scales to identify deontologist respondents. Conjoint choice experiments allow us to identify nuanced trade-offs between economic, strategic and normative aspects of arms transfers. Our theoretical argument, empirical analysis and sample size calculation follow an extensive pre-registration (see Appendix B).

Our results imply that around 10-15% of respondents voice principled opposition to arms trades even under most favorable context conditions. A majority strongly conditions their support on the economic, strategic and normative characteristics of an arms transfer, with the latter bearing the strongest relative weight. Notably, certain attribute configurations moderate these relative weights. For example, defensive wars attenuate concerns for trade with states in conflict. International supply competition alleviates normative concerns and enhances the relevance of the economic and strategic dimension. Comparing between French and German respondents, we show that the general calculus is similar for both populations, while German respondents are more likely to express principled opposition, and give larger weight to unfavorable normative contexts in general.

³ We thus follow a most different systems design logic (within EU/NATO democracies), i.e., a multi-method approach with cases embedded in a quantitative design (Seawright 2016).

We hence contribute a public opinion perspective to an otherwise state- and elite-focused literature (e.g. Kinne 2016; Perkins and Neumayer 2010; Thurner et al. 2019). We identify how different arguments on arms trade in elite-level political discourse reflect in the distribution of citizen preferences and the weights assigned to the arguments. Theoretically (García-Alonso and Levine 2007) and anecdotally, we would for example expect that deontologist preferences are unlikely at the government level,⁴ and that the weights that citizens attach to the economic, geo-strategic and economic dimension of arms trade differ from that of governments.⁵

More broadly, our insights relate to a growing literature investigating heterogeneity in the preference formation processes of citizens. On the one hand, our results indicate that deontologist preferences could be an overlooked aspect of public opinion on foreign policy making, at least whenever deadly force is in question. On the other hand, our arguments and results associate with recent findings in related areas where (domestic) economic benefits, security and normative consideration interact (albeit to varying degrees) – for example decisions on military interventions (Tomz and Weeks 2020; Dill and Schubiger 2020), provision of foreign aid (Heinrich, Kobayashi and Long 2018), international trade (Lechner 2016) or foreign direct investment (Rudolph, Kolcava and Bernauer 2022).

In the next section we delineate a theory of how arms transfer preferences of citizens are formed and how they might differ in two major European exporters. Then, we describe our empirical design including data collection and data analysis. Section 5 outlines the results regarding our major research questions. Finally, we conclude the article highlighting especially its policy relevance.

⁴ Some legislative parties seemingly follow deontologist motivations at certain times. But already the prospect of governmental responsibility anecdotally leads such parties (e.g., the German Greens) to turn to a consequentialist logic (https://www.deutschlandfunk.de/nach-waffenexport-aeusserungen-habeck-und-die-gruenen-haben.720.de.html?dram:article_id=497859).

⁵ Notably, the political economy literature (e.g. Levine, Sen and Smith 1994) sees normative aspects as only indirectly affecting the government calculus (via geo-strategic interest).

2 Citizen’s decision making on arms exports

Political economy models of state-level decision-making on arms exports explain decision-making primarily on instrumental grounds, i.e., they focus on economic and geo-strategic aspects of a trade (García-Alonso and Levine 2007; Levine, Sen and Smith 1994). Normative aspects of a weapons trade, in particular legal principles (e.g., the UN Arms Trade Treaty, the EU Council Decision (CFSP) 2019/1560, the German War Weapons Control Act), can additionally constrain exports, e.g., to conflict zones or authoritarian regimes. How these principles come into being is not explained by these models themselves, and usually the relevance of normative aspects is conceived as indirectly affecting the government calculus (via geo-strategic interest, e.g. when fueling internal conflict (Pamp et al. 2018) also leads to poverty, terrorism or migration flows) (Levine, Sen and Smith 1994). At the government level, this triad of aspects entails complex trade-offs, where economically beneficial deals may be detrimental to a country’s strategic objectives (e.g., when trading with unreliable partners) just as normative concerns may stand in the way of economically/strategically beneficial deals (e.g., when trading with human-rights violating regimes).

But how do citizens assess arms trades? Recent scholarship has transcended the view that citizen decision making is shaped exclusively by materialist considerations, and has consequently expanded the foundations on which preferences form. This evolving literature shows, for example, that normative reasoning can shape public support for sanctions or even war (Onderco 2017; Tomz and Weeks 2020); that the public cares about human rights violations in other countries, sacrificing domestic economic benefits to punish human rights violators (Allendoerfer 2017); and that citizens take into account non-economic factors in trade preference formation (Rudolph et al. 2023; Kolcava, Rudolph and Bernauer 2021). However, these findings are mostly motivated with a consequentialist

calculus, where citizens form preferences over policies based on the effects they have. But citizens might also form preferences regardless of their consequences, i.e., based on deontological motivations (Alexander and Moore 2021). While both motivations might lead to the same observed preference in any concrete case, their nature is very different – as evident in the contrast between Weberian *Gesinnungsethik* and *Verantwortungsethik* as the respective basis for political behavior (Weber 1926). Hence, we aim to disentangle in a first step the prevalence of deontologist from consequentialist reasoning; only then can we, in a second step, theorize on the concrete trade-offs that any actual arms trade might have, would it (not) be conducted; and develop, in a third step, arguments about potential differences by country contexts.

2.1 Deontological motivations

Take an exemplary trade that substantively raises the domestic economy, supports a strategic partner country, and goes to a peace abiding, or even an aggressively attacked state. If the political economy literature has its assumptions right, and geo-strategic, economic, and normative concerns are the core determinants of utility functions, governments, just as well as citizens should approve such a trade. Irrespective of whether their reasoning focuses on economic, normative or strategic arguments, this trade should be maximizing their utility.

But citizens (and politicians) may be fundamentally opposed to any arms transfer for principled reasons, viewing any transfer of weapons as an unconditional bad.⁶ For example, radical pacifist views would fall in this category (Cady 2010). Radical pacifists would see any violence as inappropriate, i.e., as an immoral mean, irrespective of the ends this mean is to support. As any trade of arms would enable such violence, it is rejected.

⁶ Principled support is a theoretical possibility, but unlikely to be relevant for arms trade.

Such motivations are the most plausible source of principled opposition in our case: in (European) political discourse, they are prominently voiced by civil society organizations connected to the peace movement and pacifist advocates (e.g. Holden 2017).

Importantly, pacifism is not the only possible foundation for principled opposition (e.g., isolationists might similarly reject any transfer), and the grounds on which principled opposition is based likely differs by country contexts. Rathbun and Stein (2020) make the compelling argument that morality and egoism should not be conflated with deontological and consequentialist decision making – either mode of decision making can be based in moral reasoning. But we argue that it is important to know about the size of principled preferences, as such citizens put stronger constraints on governments. Consequentialists support the transfer of arms under specific context conditions – which changes the nature of the game to one of policy design (e.g. Bechtel, Hainmueller and Margalit 2017) and persuasion (e.g. Gadarian 2010) to bridge potential gaps between elite and population preferences (Smetana and Onderco 2022; Kertzer 2020). A relevant share of deontologists, however, decreases the maneuverability of governments (Zhang 2019). Additionally, we propose that deontologist citizens are likely attaching higher importance to party positions in this area and are hence more likely to hold political parties to account for their policy (Gerber et al. 2011).

So far, the prevalence of fundamental convictions has rarely been invoked to explain the structure of citizen’s foreign policy preferences.⁷ As a first goal of this article, we

⁷ To our knowledge, they have primarily been related to the use of weapons of mass destruction. E.g., Press, Sagan and Valentino (2013) propose that US citizens primarily reject nuclear weapon use for consequentialist, rather than principled motivations proposed by theories of a ‘nuclear taboo’, a preference structure identified for other Western countries as well (Dill, Sagan and Valentino 2022). Still, a sizable share of the population holds ‘taboo-like’ preferences (Blair, Chu and Schwartz 2022), and this can be strengthened by providing information (Koch and Wells 2021). Outside of this field, rare applications include the question of civilian protection (e.g. Dill, Sagan and Valentino 2022; Bell, Gift and Monten 2022), war on terror (e.g. Nincic and Ramos 2011) and support for war (Dill and Schubiger 2020).

will therefore identify the extent to which opposition ‘per se’ prevails in mass public preferences regarding arms transfers. On the aggregate level, the share of citizens that follow such preferences could thus be indicative of challenges to an instrumentally oriented government strategy for reasons of democratic accountability.

2.2 Economic, strategic and normative dimensions of arms trades and their weight in a consequentialist calculus

Citizens that follow a consequentialist calculus attach individually varying weights to the likely consequences of weapon deals for the sending and receiving country. We therefore assess, as a second goal of this article, the relative weight of three core dimensions (see also Dill and Schubiger 2020), economic, strategic, and normative consequences of an arms trade.

If citizens give large weight to the economic dimension, welfare consequences of arms exports (job market/income consequences) should strongly determine public preferences. As the immediate welfare consequences of arms trades are easily observable, and have direct positive consequences for the domestic economy, economic attributes of arms trades provide an easy-to-follow guidance when forming decisions. We propose that utility maximization should entail a strict increase of approval for arms transfers with increasing economic benefits, all else equal.

If citizens give large weight to geo-strategic interests, they should take into account the potential security implications of an arms deal. Just as in a government’s optimization problem, arms deals can be considered harmful or beneficial to a country’s long-term security environment, depending on whether trades support allies or adversaries (García-Alonso and Levine 2007). As these security implications are not easily observable, citizens and even political elites have to follow cues provided by attributes of the receiving country.

First and foremost, trades with geo-strategic partners should be considered beneficial, as these trades come about with positive security externalities for the sending country. If citizens give large weight to this dimension, we should observe higher support for trade with such geo-strategic partners.

Last, if citizens give large weight to the normative dimension, we propose that the consequences of an arms trade for the receiving country are at the center-stage of considerations.⁸ These normative considerations are steered by legal consideration and moral dilemmas. Contrary to principled opposition, the likely effects of weapons trades are considered. On the basis of *hypothetical imperatives*, citizens would form preferences over arms trades based on their effects (Chen and Schonger 2022). Citizens would differentiate whether arms will likely be used to repress a population (compared to upholding a lawful state monopoly of power) or whether arms are employed for rightful defensive or unlawful offensive purposes (Bellamy 2006). Theories of just war (Cady 2010) would argue that the use of violence, and thereby arms trade, may be morally acceptable or even required if it serves rightful ends – three attributes of receiving countries are easily observable for citizens and informative in this respect: the receiving country’s regime characteristic, especially if it is a democracy; its human rights situation; and whether it is currently engaged in violent conflict. Arms exports should fall under rightful ends if they support democratic and human-rights upholding regimes (as indication that arms are used to ensure a lawful state monopoly of power rather than to oppress) and should be approved where they support justified violence, particularly defense against terrorists, rebels or foreign state aggression.

We will apply a research design that forces citizens to form decisions that reveal trade-

⁸ We are aware that normative reasoning can also affect the weight of the above-mentioned attributes. E.g., high in-group solidarity could lead to a (morally founded) precedence of economic attributes (Rathbun and Stein 2020). Hence, we do not argue that a large weight of economic or geo-strategic aspects implies amoral decision making.

offs between these three dimensions. Psychological literature points to the ease of attitude accessibility (Krosnick 1989) to explain which aspects guide decision making: questions of war and peace, human rights violations or autocratic leadership concern fundamental principles of social life and are both easily understood and important to many citizens, hence the normative dimension relates to networks of frequently accessed attitudes in memory; also, such questions of war and peace or human rights directly relate to emotions, which are particularly accessible (Rocklage and Fazio 2018). High attitude accessibility in turn would explain a large weight of this normative dimension in decision making. This could also come about as the strategic aspects of an arms trade are not easily observable for citizens, and as the economic aspects are detached from the day-to-day life of citizens (leading to low egotropic motivations) – and even if sociotropic motivations were strong (but see Schaffer and Spilker 2019), these sociotropic motivations are likely discounted due to the low absolute share the arms industry holds in Western economies.⁹

However, we also expect that the weight of economic, strategic and normative aspects is influenced by the presence or absence of moderators, i.e., whether the relevance of these dimensions can be activated by moderators. This relates to the question how stable the decision-calculus of citizens is, and whether the weight of the three dimensions varies depending on specific contexts. To this end, we investigate how five aspects affect the relative weight of normative, economic and geo-strategic attributes: first, the influence of international supply competition over market shares, which is a strong determinant of non-Pareto-efficient outcomes in political economy models (García-Alonso and Levine 2007); second, economic interests as mediator for the relevance of normative arguments, an argument made in the foreign aid literature (e.g. Heinrich, Kobayashi and Long 2018);

⁹ E.g., German arms exports in 2018 amount to 4.82 billion Euro, with GDP at 3388.2 billion (0.14%) (see <https://www.bmwi.de/Redaktion/DE/Publikationen/Aussenwirtschaft/ruestungsexportbericht-2018.html>).

third, wars of rightful regimes as a use of force more likely to be legitimate compared to wars of oppressive regimes; fourth, higher caution in trade approval when the military equipment to be traded is more lethal (Cady 2010); and fifth, whether exports to geo-strategic partners find higher approval when these are democracies (who likely are more reliable) (Johns and Davies 2012). In sum, this will inform on the one hand to what extent the basic citizen calculus differs from standard political-economy models directed towards strategic aspects and the economy, by prominently incorporating now a normative dimension. On the other hand, the question on moderators will be indicative for the reactivity of public opinion with respect to arms transfers given particular nuanced side-constraints for decision-making.

2.3 German-French differences

As a third goal of our article, we investigate to what extent both deontologist motivations and the consequentialist calculus differ between country contexts. For this, we draw on Germany and France as divergent cases, with an anti-militarist and restrained foreign policy culture in post-war Germany following the experience of World War II (Endres 2018: 51ff.), and with French political culture striving for international “rang” and “grandeur” (see, e.g. Krotz 2015: 68ff.), where the military, the use of military force as well as the national arms production have high legitimacy (Krotz 2015: 114ff.). We expect that German citizens show relatively less support for weapons deals on average, are more likely to exhibit deontologist preferences, and react more strongly to norm-related dimensions. This would provide a case in point that public opinion constrains governments’ arms trade behavior to a differing extent based on deep societal preferences.

Figure 1 provides a summary of the expectations outlined so far.

Figure 1: Summary of theoretical expectations

3 Research Design

The following section presents our research design. Our study was preregistered at <https://osf.io/uewrt/>, and the questionnaire can be accessed via <https://osf.io/kn59j/>. Appendix B presents difference to the pre-analysis plan.

3.1 Data and Survey Design

Drawing on a population-representative quota sample of 6,617 respondents from Germany ($N=3,250$) and France ($N=3,367$) (field time 10/2020-01/2021) with Kantar’s opt-in online panel, we fielded standard survey questions on socio-demographics and political attitudes as well as conjoint and vignette survey experiments. We set quotas on age, education, gender, and region.¹⁰ Procedure and survey instrument were approved by the

¹⁰ Appendix Tables A.1-A.2 display realized and target quotas, A.3 non-quota characteristics.

Ethics Commission of the Social Science Faculty of LMU Munich . Appendix Section A.3.1 details how we adhered to core Principles for Human Subjects Research.

Figure 2 presents the survey flow. Respondents started with standard survey questions on socio-demographic covariates, before entering the core of our research design, the conjoint experiment (Hainmueller, Hopkins and Yamamoto 2014). For this, we introduced respondents to a scenario in which they were to assess two hypothetical arms transfers (*profiles*), taking care to avoid any positive or negative framing effects when introducing the topic. Two profiles were presented in a tabular format, side-by-side, differing along nine theoretically chosen attributes with two to five uniformly randomized attribute levels (details on attributes and levels in Subsection 3.2). This presentation eases the accessibility of the complex multidimensional nature of arms exports. In our conjoint, respondents then had to choose their preferred profile, and rate each individually on a 7-point scale. Appendix Figure A.2 exemplifies these choice and rating tasks as seen by respondents. We confronted respondents with six such paired arms export profiles, hence six choice and twelve rating tasks. We use the rating task for our first objective – assuming that deontologist respondents rate even the most favorable profile lowly, and provide low ratings throughout all their twelve rating tasks. We use the choice task for our second objective – as it allows us to identify the weight and trade-offs of a consequentialist calculus. With 6 conjoint tasks K consisting of two profiles J we have $N \cdot K \cdot J = 79,404$ observations on the profile-level. Extensive pre-registered power simulations (Schuessler and Freitag 2020) motivated this sample size.

As low ratings even for conjoint profiles could also be driven by consequentialist rejection, i.e., respondents not seeing what they personally would deem a favorable context beyond our choice of attributes and attribute values, or just by random noise, we triangulate deontologist motivations with additional survey items. Key for this is, first,

an experimental vignette (Mutz 2011) focusing on the trade-off between large/small economic gains and a human-rights abiding democracy vs. a human-rights violating autocracy in a 2x2 design. Here, we asked respondents to explicitly explain their motivation for (dis)agreement with at least two sentences in a text box. Respondents had to enter text to proceed with the survey. We used respondents that rejected a ‘favorable’ vignette (human-rights abiding democracy with high value) and traced whether they voice deontologist motivations in their open-ended justifications. Second, we use replies to standard survey items of a battery on general attitudes towards arms transfers, expecting deontologists to perceive arms trade as “morally bad”, “not permissible” even under favorable conditions, and “to be restricted” in principle. Appendix Section A.4 provides details on this procedure. Last but not least, we would expect that deontologist respondents have a difficult time making choice decisions in the conjoint experiment – hence, we investigate whether their choices are attenuated towards zero in the conjoint experiment (see below). Overall, we propose that this triangulation provides for a sensible approximation to a hard-to-measure subgroup.

In a final experimental question, we also investigate the importance of arms transfers for respondents’ voting behavior with a split-survey experiment, to assess our expectations that the position of political parties on arms trade is more important for deontologist respondents. Our survey instrument, lastly, contained several standard survey items on preferences towards war and peace (Bizumic et al. 2013), as well as established foreign policy item batteries (Kertzer et al. 2014) (not reported upon in this manuscript).

As speeding and satisficing are well-known issues in online surveys the survey company excluded respondents faster than 40% of median survey time during data collection.¹¹ Further problematic cases (especially straight-liners and super-speeders in standard item

¹¹ This threshold was agreed upon with the survey company before gathering the data as part of our contract for 6,600 high-quality responses.

Figure 2: Survey flow. Presented are question blocks used for the analysis in this article. Detailed survey flow contained in pre-registered survey instrument at [blinded].

batteries or super-speeders in all conjoint tasks) were also excluded.¹²

3.2 Set-up of the conjoint experiments

Our theoretical framework proposed that consequentialist respondents have to reconcile an economic, strategic and normative dimension of arms trade in their decision making. We operationalize these dimensions by nine attributes (summarized in Table 1). The attributes we chose mimic typical aspects of arms trade present in public discourse, hence the information actually available to citizens. This also implies that economic consequences are rather concrete (monetary value/employment benefits), while normative/strategic implications are rather abstract and proxied by target country characteristics. Concerning attribute levels, we focus on the range of observable levels of these attributes to present respondents with realistic trade-offs and to speak to actual arms trade policy decisions.

Details on the choice of attributes and levels are provided in Appendix Section A.5. In short, we translate the economic dimension to three aspects: the gross welfare added (range: observed exports in 2019), employment consequences (negligible to 5,000, a medium-sized firm, as upper bound), and exports to an important trade partner (binary yes/no). We translate the strategic dimension of arms trade to negative/positive security externalities, which link to alliance status. We capture this by a security partnership between seller/target (binary yes/no). Concerning the normative dimension, global regulatory commitments highlight regime type, human rights situation and conflict status of the target country. We translate this into democratic vs. non-democratic, (no) (strong) violation of human rights, and common types of conflict situations. We present two more

¹² $N = 514$. This is unlikely to bias our measure of deontologist preferences. Deontologists would not generally super-speed through the first conjoint task (with instructions). Also, item batteries are partly reverse coded, hence straightliners cannot hold consistent preferences.

attributes as potential moderating factors: on the one hand, the product to be traded (from defensive equipment to large scale weapons), which also prevents respondents from inferring weapon type and its harm potential from the monetary value of the deal; on the other hand, international competition (“unknown” vs. allies vs. rivals trading). We explicitly stay silent on the country that is to be traded with, to avoid unrealistic profiles and idiosyncratic country perceptions to affect preference formation.

3.2.1 Causal Quantities and Estimation

We base our analysis on average marginal component effects (AMCEs, Hainmueller, Hopkins and Yamamoto (2014)) with marginal means (MMs, Leeper, Hobolt and Tilley (2020)) and average component effects (ACPs, Ganter (2020)) for subgroup comparisons.¹³ AMCEs give the average causal effect on the probability of choosing an arms transfer when changing a level of an attribute within a profile from a baseline to another level, while averaging over the randomized distribution of other attributes.¹⁴ AMCEs and MMs are estimated based on a saturated linear regression model, with respondent-clustered standard errors. We analyze the relevance of moderators by capturing interaction effects among attributes of the choice task, i.e., we include relevant interaction terms between attributes (i.e. AMCIEs or differences in marginal means). For reasons of survey design, we estimate AMCEs with the choice task for all respondents. This allows us to arrive at population-level marginal shifts in public opinion with changes in attribute level. Our

¹³ Note that there has been some recent methodological debate about quantities of interest in conjoint experiments. AMCEs (and MMs) do not capture (average) preferences over outcomes in the paired choice sense – when comparing two alternatives that differ on a level of an attribute – which may be problematic if profile compositional effects are not of interest (Ganter 2020). Thus, Ganter (2020) and Abramson et al. (2020) suggest a different quantity calculated only on contrasting profiles. In our case, this alternative quantity implies substantially very similar conclusions.

¹⁴ Averaging equivalently, marginal means are then simply the probability of choosing an export when the attribute is randomized to a specific level and differences thereof form AMCEs (Leeper, Hobolt and Tilley 2020).

Table 1: Attribute Wording and Levels

Dimension	Attributes	Level
Normative	Government elected democratically?	<ul style="list-style-type: none"> – Democratically elected – Not democratically elected
	Human rights situation in the country?	<ul style="list-style-type: none"> – Human rights respected – Freedom of expression suppressed – Dissidents persecuted/incarcerated/tortured
	Military conflicts in the country?	<ul style="list-style-type: none"> – Peace in the country – Civil war with rebels – Country at war, under attack – Country at war, attacks
Strategic	Is country important for security of Germany/France?	<ul style="list-style-type: none"> – Important partner – Not an important partner
Economic	Does country trade goods with Germany/France?	<ul style="list-style-type: none"> – A lot of trade of goods – Little trade of goods
	Economic profits for Germany/France in million Euro in total?	<ul style="list-style-type: none"> – 1 m – 10 m – 100 m – 1000 m (1 bn)
	How many jobs in Germany/France will be lost without delivery?	<ul style="list-style-type: none"> – 100 – 1000 – 5000
Moderators	What is to be delivered?	<ul style="list-style-type: none"> – Military protective equipment – Small arms (e.g. rifles, pistols) – Large weapons (e.g. tanks, aircraft, ships) – Military reconnaissance and surveillance systems
	Do other countries already supply weapons?	<ul style="list-style-type: none"> – Unknown – France/Germany – China and Russia – NATO partners (USA, UK, France/Germany)

Note: English translation of the conjoint attributes and levels. For original wording see master questionnaire (pre-registered: <https://osf.io/kn59j/>).

results are substantively comparable if we focus on non-deontologist respondents. An advantage of this approach is also that AMCEs thus allow us to focus on marginal shifts in overall public opinion with changes in attribute levels.

4 Results

4.1 Deontologist Motivations

We start with an indication of baseline preferences on arms deals. To this end, we turn to the average ratings of respondents in the conjoint experiment. Over all packages, support on the seven point rating scale is at 3.23 with a median of 3. Defining a rating of 4 and above as (tentative) approval, a majority of the arms trades we presented to respondents would therefore be rejected.

However, ratings are very heterogeneous. Particularly, we detect around 10-15% of respondents exhibiting deontologists motivations. As outlined in section 3.1, we derive this figure with two approaches. First, we identify highly favorable arms trade packages in the conjoint experiment, contrasting these with an unfavorable package. As presented in Figure 3 the distribution of ratings differs starkly. Whereas a favorable package sees a mean of slightly above 4, as well as a median of four, an unfavorable package sees a median of 2 and a mean of 2.7. This implies on the one hand, that the median citizen can become favorable with respect to arms deals in specific situations on an absolute scale. But this also indicates, on the other hand, that most arms deals, even if preferred under a forced choice design, see absolute ratings below a median of 4, i.e. they are assessed unfavorable on average. Notably, what becomes evident from these distributions is that a sizable share of the population (15%) is strictly opposed even in a very favorable scenario,

indicating principled opposition.¹⁵

Figure 3: Average support for (un)favorable packages overall. $N = 72$ (left panel) / 99 (right panel). Dotted (dashed) line indicates mean (median). Favorable package defined as: democratic; human rights upheld; no (civil) war; trade/security partner; high/medium monetary/employment benefit; defensive weapons traded; NATO/FR/GER also trading. Unfavorable packages are the inverse of this list.

Second, we focus on the set of respondents replying with reject over all presented choice-tasks, irrespective of attribute configuration, and an additional rejection of arms trades in a favorable textual vignette (15% of respondents, 13% in France, and 21% in Germany). We term this group ‘rejectors’. These ‘rejectors’ are an upwardly biased indication of deontologists, however: respondents might have a threshold for approving arms trades not captured by our scenario; or respondents might, randomly, not have seen

¹⁵ Supplementary analysis indicates that among these 15% (18% in Germany, 13% in France), 67% (76% in Germany, 57% in France) never voice a rating above 1 in any choice task, indicating a lower bound for deontologist responses at 10% (14% in Germany, 7% in France) with this approach.

profiles they would accept. Hence, we triangulate the extent to which these rejectors actually hold deontologist preferences by way of stated motivations in open-ended survey responses and respondents' general attitudes towards arms transfers and war and peace.

Table 2 indicates that among the 15% of rejectors, around 75% of respondents voice clear deontologist motivations in the open-ended survey question. Hence, open responses would suggest a lower bound of $188/1654 = 11.4\%$ deontological respondents (9.7% in France, and 16.1% in Germany). We might even miss some respondents with principled opposition that respond with unclear statements in the open-ended question. We further validate this finding by assessing the general attitudes of these respondents towards arms transfers. Figure 4 shows that among rejectors, only a small minority of 1% to 11% would agree to statements that deontologists should reject. A similar picture emerges from rejectors' replies to a battery of items on general attitudes towards war (see Appendix Figure A.3).

Overall, this points to a share of deontologist respondents of around 10-15%, indicating that a substantial part of the population is in fundamental opposition to weapon transfers.

Table 2: Classification of open text answers for rejectors

Classification of open response		n	Percent
Germany			
	Fundamental rejection	115	78.23%
	Consequentialist rejection	18	12.24%
	Unclear	9	6.12%
	Illegible	5	3.40%
Total		147	100.00%
France			
	Fundamental rejection	73	73.00%
	Consequentialist rejection	12	12.00%
	Unclear	11	11.00%
	Illegible	4	4.00%
Total		100	100.00%

*Rejectors defined as respondents with max. rating 3 in all twelve conjoint tasks plus rejection of textual vignette. Experimental subset of respondents who saw a positive vignette used ($247/1654 = 14.93\%$ of respondents). Hence, open responses would suggest a lower bound of $188/1654 = 11.37\%$ deontological respondents. When defining rejectors as respondents with max. rating 1 in all twelve conjoint tasks, this lower bound is approx. 7%.

Figure 4: Responses to general attitudes towards arms transfers for rejectors in conjoint

4.2 How Norms, Economic and Strategic Aspects Influence Preference Formation

Next, we turn to the causal effect of specific attribute levels on the probability of choice in the choice task using AMCEs.¹⁶ The counter-factual comparison refers to level-changes within a profile (Bansak 2020). As AMCEs are estimated on the same scale, they are substantively comparable, yet bounded by the number of levels (Leeper, Hobolt and Tilley 2020; Ganter 2020). Therefore, inter-attribute comparisons have to be conducted with some care. As a rule of thumb, one can multiply AMCEs by the number of levels

¹⁶ Corresponding MMs are presented in Appendix Figure A.4, ACPs in A.6.

of the attribute l divided by $(1 - l)$. In our case, this does not change interpretations substantially, hence we can infer the relative importance of attributes directly from the relative size of AMCEs.

Figure 5 first presents the attributes of the normative dimension: An arms transfer to an autocratic (compared to a democratically elected) regime decreases support by -0.105 , i.e. 11 percentage points, on average. A similar difference becomes evident for the state of human rights: compared to no violations, (strong) violations cause an average decrease in choice of -0.148 (-0.192), i.e. we see a penalty up to 20 percentage points for such unfavorable contexts. Turning to the conflict situation, an arms export to a country at war that acts aggressively (compared to a country at peace) leads to a decrease in the acceptance of such a transfer by 16 percentage points (-0.164). For countries at civil war with rebels, the effect is roughly half the size. Although negative in direction when compared to a country at peace, and significant, the effects of countries defending themselves from an aggressor or a terrorist group on the acceptance of an arms transfer are, in line with expectations, much smaller. This already indicates that weapons deals are not substantially penalized when used for “just” causes – but notably, we also do not see that respondents take such “just” causes as indicator that weapons should be traded (relative to a peaceful context). Turning to the economic dimension of arms trade, very high monetary values (change from “1 million”) increase support substantially by around 7 percentage points (0.071). The number of jobs at risk exert a positive, albeit substantively small effect on the average acceptance of an arms transfer, by around 1.5 percentage points (0.014). On average, respondents therefore do not seem to give the job argument, oftentimes referenced in public debates, much weight in their calculus. Lastly, respondent support increases more strongly with trade with important trade partners, by around 4 percentage points (0.035 , level-change from “Little trade of goods”). Turning

to the security dimension of arms trade, respondents also react in a relevant way to trade with important security partners by 6 percentage points (0.06, level-change from "Not an important partner"). Lastly, we interpret two moderators we propose, weapon type and international competition. The main effects of these moderators are clearly visible: A change in the weapon type from large or small weapon systems to weapon systems with a more indirect harm potential (surveillance technology or protective equipment) increases average support for an arms transfer (penalty for large weapons systems around 8 percentage points (-0.075)). Moreover, providing information on which countries already supply weapons (baseline: "unknown") increases support with allied states trading (0.084 with NATO partners), and decreases support with adversaries trading (-0.023).

Overall, it becomes evident that arms exports see substantively and significantly higher support when alleviating potential normative concerns, with non-linear, disproportionate increases in choice probabilities when human rights are fully upheld, and when the fighting context is terrorist-combative, defensive or peaceful. While economically and strategically beneficial attribute values also see a causally increased choice probability, respondents react less strongly to these dimensions. The data hence supports our theoretical expectation that normative, economic and security-related considerations shape preferences for arms trade – but most influential is the normative dimension. Changes in the pattern of ratings are very similar (see Appendix Figure A.5). We also reach similar conclusions when interpreting average component preferences that more directly allow for inter-attribute comparisons of preferences (Ganter 2020) (see Appendix Figure A.6).

Last, we discuss how deontologist vs. consequentialist respondents reply to the choice task (see Appendix Figure A.7). We expected that deontologists consider information on the implications of arms transfers to a lesser extent (or not at all), hence react less to the conjoint experimental stimuli in the forced-choice setting, and if at all react to the

normative dimension. This is also what we find: Choices of deontologist respondents are dampened compared to consequentialists. For economic and strategic aspects they are attenuated to zero or close to zero, for the normative dimension deontologists respond with a comparable, though attenuated pattern. This also implies that all our conclusions for the discussion of AMCEs above holds for consequentialist respondents.

Figure 5: AMCEs for the choice task.

4.3 Trade-Offs in the Calculus

We now turn towards the question of whether the specific contextual setting of an arms transfer moderates the observed effects.¹⁷

Concerning international supply competition, we find that this enhances the weight of economic and strategic arguments. With any other country supplying weapons to the target country (see panel a) of Figure 6), trades with trade partners ($p=0.061$), high value deals ($p=0.082$) and medium- to high-employment deals ($p=0.003$ and $p=0.066$) see higher levels of support. While small in absolute magnitude, interaction effects are around one third of the main effects for trade partnership and monetary value, and only seem to show at all under competition for employment effects. With adversaries supplying weapons to the target country (see panel b)), arms transfers to unfavorable contexts become more likely. While autocratic regime type is similarly negative in both scenarios, moderate ($p=0.083$) and severe human rights violations are more likely accepted ($p=0.014$), as is intra-state ($p=0.081$) and aggressive inter-state war ($p=0.006$). Again, effects are absolutely small, but meaningful in relative terms: we see a reduction of the penalty for human rights violations around 14%, and of the penalty for inter- or intra-state war of around 22%. Concerning the question whether positive economic consequences of arms deals dampen the relevance of adverse normative contexts, we do not find any evidence (see Appendix Figure A.8). AMCEs differ only marginally between these contexts, and war situations (compared to peace) are even judged more detrimental to choice with high economic value. Concerning the question whether trades with rightful regimes (defined as human-rights upholding democracies) in war are more likely to be supported compared to trades with oppressive regimes in war, we find support. As already discussed above, trades

¹⁷ For this, we present AMCEs for the theoretical dimension of interest comparing over expressions of other attributes (i.e., we calculate AMCIEs). For example, we interact the AMCEs for attributes in the economic dimension by whether the attribute on “Which other countries trade?” is set to “unknown” vs. any other level.

to war contexts see a much higher choice probability if they are defensive compared to offensive, with a substantial difference in choice probabilities of 15 percentage points. As well, when weapons likely support a rightful state monopoly of power (see panel c) of Figure 6), defensive war contexts ($p=0.018$) and conflict with terrorists ($p=0.072$) no longer receive a meaningful penalty. The penalty for civil wars decreases ($p=0.020$) by 38%. Notably, we observe no change in preferences for aggressive inter-state wars comparing rightful and unrightful regimes. Last, as can be seen from Appendix Figure A.9, respondents become more cautious to approve trades to conflict contexts, when the military equipment to be traded is more lethal. Altogether, this indicates that citizens' decision making along the normative dimension is influenced by considerations of just war theory, e.g. *right cause*, *right authority* and *proportionate response* (Cady 2010). Finally, we investigate an implication of democratic peace theory. Indeed (see panel d) of Figure 6), trades with strategic partners see higher choice probabilities (22% of main effect), when these partners are democracies ($p=0.086$).

In summarizing these findings, we conclude that relevant moderations of decision attributes appear, and that (besides no evidence for economically beneficial contexts alleviating normative concerns) the weight of the strategic and normative dimension can be activated by the presence of moderators. This highlights that, even if the normative dimension seems to drive preference formation on aggregate, citizens show a very nuanced calculus concerning arms trades.

Panel b) Moderation of country and conflict attributes by competition from adversaries

Panel a) Moderation of economic attributes by any international competition

Panel c) Moderation of war context by rightful regime

Panel d) Moderation of strategic partnership by democratic regime

Figure 6: Four tests for interaction effects: AMCEs and AMCEs for attributes listed by moderator as indicated in panels a)-d).

4.4 German-French Differences and Policy Relevance

Lastly, we assess whether German and French respondents show different preference structures, and discuss why this might be relevant for the decision making of governments. To start with, respondents from Germany and France show nuances in their average response to the conjoint experiment. Figure 7 presents MMs by country for the choice task (see Appendix Figure A.11 for AMCEs). This reveals first of all that the general pattern of preferences is similar in both countries. Secondly, however, German respondents take severe human rights situations more strongly into account, have a stronger preference for peaceful contexts (and are less supportive of ‘wars on terror’), react weaker to the monetary value of the deal (although slightly stronger to employment benefits), have a stronger distaste for large weapons, and react more strongly to NATO compared to French co-deliveries. Overall, German respondents therefore show, on average, a more sensitive reaction to characteristics of the target country and the nature of the deal (i.e., to ‘good’ vs. ‘bad’ deals for the recipient population) and less reaction to economic co-benefits. This goes hand in hand with an, on average, more skeptical rating of arms deals in Germany compared to France (see Appendix Figure A.10). Over all displayed profiles German respondents assess arms trades with a mean of 3.05 and median of 3 (i.e. rejection), French respondents with a mean of 3.40 and median of 4 (i.e., tentative acceptance). Correspondingly, 29% (21%) of displayed arms trades are vividly rejected by German (French) respondents (rating of 1), and 59% (49%) see a clear rejection with a rating below the scale mid-point in Germany (France).

Why does this matter? As we argue, this matters on the one hand side because the German public has a different structure of disapproval, making it difficult to find common grounds on arms exports on French terms. To provide an indication for this, we investigate the distribution of ratings for arms trade profiles crossing over a favorable vs.

unfavorable governance and conflict context and a high vs. low economic value of a trade. As can be seen from Appendix Figure A.12 (upper four plots), the share of respondents that are fundamentally opposed to an arms trade (rating of 1) is substantially higher in Germany when the trade goes to a unfavorable governance and conflict context: 20 percentage points higher with low economic value, and 7 percentage points higher with high economic value. Similarly, even arms trade to good governance contexts at high economic values sees fundamental opposition of around 23% of German, but only 13% of French respondents. Hence, while median support for arms trade aligns in both countries with a good governance and conflict context (at 4), it differs substantively when the governance and conflict situation is bad (by one scale point, 2 in Germany vs. 3 in France). Thus, opposition to bad governance and conflict contexts is much more pronounced in Germany. This consequently shows in the predicted ratings for specific realistic arms trade scenarios, where France and Germany might have to coordinate government policy. As displayed in Appendix Table A.5, with unfavorable governance and conflict situation predicted support is substantively lower in Germany compared to France (around 0.7 rating points with a low value transfer, example of Azerbaijan or around 0.6 rating points with a high value transfer, example of Saudi-Arabia). Support is only comparable once the governance and conflict situation is positive (see examples of Costa Rica and France/Germany). Hence, public opinion constrains the menu of acceptable arms trades more strongly in Germany compared to France.

On the other hand side, these differences matter as the share of deontologist respondents is substantively larger in Germany (14%-16%) compared to France (7%-10%) (see Section 4.1). This is an additional potentially relevant constraint to the German compared to the French government. We proposed in the theory section that principled opposition should reflect more strongly in citizens' political decision making. To test this empiri-

cally, we provide supplementary analyses in Appendix Table A.6. We asked respondents on the importance of party positions on arms trade for their election decision, experimentally varying whether they reply for the electoral importance of the position of their (on other grounds) preferred party vs. any other party. Respondents that evaluate their preferred party unsurprisingly attach substantively and significantly higher issue importance (around 0.5 points on a 5 point scale). Contrasting replies to this question by deontologist vs. consequentialist respondents, we find that deontologists attach even more importance to arms trade in decision making (by about 0.2 scalepoints), with an additional premium if the question concerns their party preferred on other grounds (by about 0.5 scale points). This indicates that deontologists constrain government maneuverability not only because of firm policy views, but also because they are more likely to hold parties to account for policy diverging from their preferences in practice. Of course, we can expect these constraints to vary by the partisan composition of governments, and the respective share of deontologists among these parties' supporters. Appendix Tables A.7 and A.8 provides tentative evidence that deontologist preference structures are more prevalent among respondents with a far-left or green party vote intention. Among respondents supporting the Greens or Left Party (for Germany), around 28-34% of respondents voice such views (compared to 10-17% of other party supporters); among respondents with a Green or Socialist/Left/Communist Party vote intention (for France), around 15-18% voice such views (compared to 5-9% of other party supporters).¹⁸

All in all, we conclude that German respondents are more caring for the normative context in target countries, react less positively to its economic benefits, and that a larger share of German respondents is in fundamental opposition compared to French

¹⁸ We approximate deontologist respondents as 'rejectors' of all 12 arms trade in the conjoint and the arms trade presented to them in the vignette. With this approach, absolute percentages are slightly overstated (approximately by about one third on average, as only 75% of 'rejectors' express deontologist motivations in the open-ended question).

Figure 7: Marginal means by country and country difference for all attributes.

respondents. Respondents in principled opposition attach higher importance to the policy issue, which implies likely stronger constraints for the German government overall. In a German-French cooperation in the realm of defense the German population could hence prove to be a bottleneck and cooperation might only be possible on German terms – if France is willing to accept these.

5 Conclusion

If the frequently implored European defense and security policy should ever realize, highly up on the EU agenda after the Russian invasion of Ukraine in 2022,¹⁹ France and Germany are ‘bound to lead’ (Nye 1990) together. This implies that not only the respective EU member states’ elites, but also their publics support such strategic alliances and agree on a common denominator with respect to security policy, including arms exports. The struggle to find common ground concerning arms transfers to Ukraine among EU and NATO countries both before and after the Russian invasion in 2022, accompanied by heated public debates, provides a case in point for the challenges this entails.

In this article, we explored this common ground from a public opinion perspective, focusing on the German and French public. So far, little to nothing is known about mass public preferences on arms exports. Experimental studies on attitudes towards this foreign policy issue do (to our knowledge) not exist for these two countries, nor for any other country worldwide. Using conjoint and vignette experiments, we investigated the extent of principled opposition to any arms trade, and the weight of three core dimensions, normative, economic and strategic aspects, for citizens’ opinion formation. Respondents in both Germany and France give largest weight to the normative implications of arms exports, while also taking economic and strategic aspects of a deal into account. Also, respondents react in nuanced ways to side-constraints that can further exports (e.g., when supporting defensive wars or trading in a competitive environment), even if a majority of respondents is rather skeptical. However, a larger share of respondents is in fundamental opposition towards arms exports in Germany, and exports to autocratic, human-rights abusive, or conflict-prone contexts find stronger opposition in Germany compared to France. Hence,

¹⁹ <https://www.consilium.europa.eu/en/press/press-releases/2022/03/21/a-strategic-compass-for-a-stronger-eu-security-and-defence-in-the-next-decade/>

we find some signs of a cross-country divergence in average preferences between the German and French public. Overall, the German government is likely constrained to a larger extent by its public, and joint action seems feasible rather on German than French terms.

These findings have clear policy relevance: Our results show that the specific circumstances of an arms transfer can induce substantial swings in public support. Exemplary, our experiment indicates (tentative) approval ratings for about 65% of respondents, and opposition for about 35% of respondents in a post-invasion Ukraine-type situation (see Figure 3), corresponding closely to what we see in real-world public opinion polls on the matter (see Appendix Section A.1). While (tentative) approval to trades in such ‘positive’ scenarios is similarly high in both France and Germany, support in Germany (but not in France) drops strongly if conditions are less ‘positive’ (e.g., comparing a pre-invasion Ukraine-scenario, where the country is at civil war). We take this as an indication that our experiment, fielded in a period of peace in Europe in late 2020, is doing well in identifying a preference structure relevant also for extreme scenarios, and hence has high external validity. Consequently, Appendix A.6.2 presents further illustrations of the bounds of support based on predicted ratings, contrasting packages that correspond to concrete country examples. They indicate that a favorable context in the normative as well as strategic and economic realm seem to need to come together for public acceptance of trades on average. Altogether, the upper bound of support for arms transfers appears to be rather low in general, and even lower in Germany compared to France. At the same time, our findings are both in line with the assertion of different strategic cultures in Germany and France (Irondelle, Mérand and Foucault 2015; Endres 2018), and with the anecdotal evidence on strong public backlash against morally repulsive, even if economically and strategically beneficial, arms deals. Based on the cross-country differences we observe, it seems plausible that the societal ‘strategic cultures’ of Germany and France differ to an extent that

in any cooperation the countries are constrained by their respective publics to a lowest common denominator in arms export policy (Putnam 1988) – which here is the restrictive German approach to arms trade. These results also hold lessons for the feasibility of an EU-wide arms exports control policy, and can contribute to explaining why these are “in crisis” (Wisotzki and Mutschler 2021). As arms exports are just one facet of a joint European security and defense policy, our results highlight broader challenges for policy design in this regard: a far-reaching unified European defense policy seems challenging in the near future

With respect to theory, our findings tie to a larger recent literature that points to the relevance of deeply rooted values and beliefs leading to well-structured foreign policy preferences (Kertzer et al. 2014; Kertzer and Zeitzoff 2017). While in our case these seem to be primarily centered around the foreign countries’ normative context, substantial subsets of the population also employ a rather strategic and/or economic calculus (Bechtel, Genovese and Scheve 2019). Even more, we also trace a segment of the population exhibiting deontological preferences (surprisingly large with around 10-15% of respondents, with substantial variation between countries), which seemingly clusters in specific parties (rather on the political left), and is seemingly more attentive to voting along its principles. This mode of decision making has largely been overlooked in the literature, but is theoretically intriguing: it leads to a wedge between what theory lets us expect for governments’ arms trade decision making (a consequentialist calculus focused on economic and security implications (García-Alonso and Levine 2007)) and citizen preferences (consequentialist putting strongest weight on the foreign countries’ normative context; and citizens in fundamental opposition rejecting any exporting-strategy throughout). Given its strong foundation in other-regarding, particularly pacifist, motivations in our case, this wedge might be relevant beyond arms exports, for all policy involving questions of war

and peace.

We see several important avenues for future research: First of all, future research could extend to other country contexts, particularly the US and UK as important democratic exporters. Second, future research should compare whether the strong normative foundation of arms trade policies is indeed peculiar to the domain of exports in military goods, or whether respondents would despise any trade (so also in non-military, and particularly elite consumption goods) with dictatorships and human-rights violators to a similar extent. Third, future research could explore motivations for deontologist preferences.²⁰ Last but not least, our research focuses on the fundamental preferences of the public vis-à-vis arms trade. In future research, it would be worthwhile to investigate to what extent the issue affects actual political behavior, e.g., voting decisions, to what extent these preferences can be politicized, e.g. when parties are campaigning for or against far-ranging policy decisions such as European integration in the defense and security domain. In other foreign policy areas, the literature has established that the public is both a vigilant observer of foreign policy (e.g., Kertzer and Zeitzoff 2017), and that its preferences matter for foreign policy-making (e.g., Goldsmith and Horiuchi 2012) – for example for trade policy (e.g., Dür and Mateo 2014) or military force (e.g., Tomz, Weeks and Yarhi-Milo 2020) (see Appendix Section A.2 for details). Our supplementary analysis indicates that principled opposition to arms exports directly relates to the issue being important for voting, and particularly so if the respondent evaluates her/his party preferred on other grounds, thereby placing stronger constraints on elected representatives.

²⁰ While the open-ended survey responses indicate first and foremost pacifist reasoning, fundamental rejection can also be fueled by anti-migration attitudes (exemplary response: “i generally reject arms deliveries. first deliver weapons and then have to take in refugees. no, not with me.”) or non-interventionism (exemplary response: “France has no business interfering in what happens elsewhere, there are far too many things to do at home.”).

References

- Abramson, Scott F, Korhan Kocak, Asya Magazinnik and Anton Strezhnev. 2020. “Improving Preference Elicitation in Conjoint Designs Using Machine Learning for Heterogeneous Effects.”.
- Agadjanian, Alexander. 2021. “When do partisans stop following the leader?” *Political Communication* 38(4):351–369.
- Alexander, Larry and Michael Moore. 2021. Deontological Ethics. In *The Stanford Encyclopedia of Philosophy*, ed. Edward N. Zalta. <https://plato.stanford.edu/archives/win2021/entries/ethics-deontological/>.
- Allendoerfer, Michelle Giacobbe. 2017. “Who cares about human rights? Public opinion about human rights foreign policy.” *Journal of Human Rights* 16(4):428–451.
- Almond, Gabriel Abraham. 1950. *The American People and Foreign Policy*. New York: Praeger.
- Anderson, Brilé, Tobias Böhmelt and Hugh Ward. 2017. “Public opinion and environmental policy output: a cross-national analysis of energy policies in Europe.” *Environmental Research Letters* 12(11):114011.
- Bakaki, Zorzeta, Tobias Böhmelt and Hugh Ward. 2020. “The Triangular Relationship between Public Concern for Environmental Issues, Policy Output, and Media Attention.” *Environmental Politics* 29(7):1157–1177.
- Bansak, Kirk. 2020. “Estimating Causal Moderation Effects with Randomized Treatments and Non-Randomized Moderators.” *arXiv:1710.02954* .

- Baum, Matthew A and Philip BK Potter. 2019. "Media, public opinion, and foreign policy in the age of social media." *The Journal of Politics* 81(2):747–756.
- Bechtel, Michael M., Federica Genovese and Kenneth F. Scheve. 2019. "Interests, Norms and Support for the Provision of Global Public Goods: The Case of Climate Cooperation." *British Journal of Political Science* 49(4):1333–1355.
- Bechtel, Michael M, Jens Hainmueller and Yotam Margalit. 2017. "Policy design and domestic support for international bailouts." *European Journal of Political Research* 56(4):864–886.
- Bell, Andrew M, Thomas Gift and Jonathan Monten. 2022. "The moral foundations of restraint: Partisanship, military training, and norms of civilian protection." *Journal of Peace Research* p. 00223433211059061.
- Bellamy, Alex J. 2006. *Just Wars: From Cicero to Iraq*. Polity Press.
- Berinsky, Adam. 2007. "Assuming the Cost of War: Events, Elites, and American Public Opinion for Military Conflict." *The Journal of Politics* 69(4):975–997.
- Bizumic, Boris, Rune Stubager, Scott Mellon, Nicolas Van der Linden, Ravi Iyer and Benjamin M Jones. 2013. "On the (in)compatibility of attitudes toward peace and war." *Political Psychology* 34(5):673–693.
- Blair, Christopher W, Jonathan A Chu and Joshua A Schwartz. 2022. "The Two Faces of Opposition to Chemical Weapons: Sincere Versus Insincere Norm-Holders." *Journal of Conflict Resolution* 66(4-5):677–703.
- Burstein, Paul. 2003. "The Impact of Public Opinion on Public Policy: A Review and an Agenda:." *Political Research Quarterly* 56(1):29–40.

- Cady, Duane. 2010. *From warism to pacifism: A moral continuum*. Temple University Press.
- Chen, Daniel L and Martin Schonger. 2022. “Social preferences or sacred values? Theory and evidence of deontological motivations.” *Science Advances* 8(19):eabb3925.
- Dill, Janina and Livia I Schubiger. 2020. “Attitudes toward the Use of Force: Instrumental Imperatives, Moral Principles, and International Law.” *American Journal of Political Science* .
- Dill, Janina, Scott D Sagan and Benjamin A Valentino. 2022. “Kettles of Hawks: Public Opinion on the Nuclear Taboo and Noncombatant Immunity in the United States, United Kingdom, France, and Israel.” *Security Studies* 31(1):1–31.
- Dür, Andreas and Gemma Mateo. 2014. “Public opinion and interest group influence: how citizen groups derailed the Anti-Counterfeiting Trade Agreement.” *Journal of European Public Policy* 21(8):1199–1217.
- Endres, Fabian. 2018. *Öffentliche Meinung und strategische Kulturen*. Springer.
- Foyle, Douglas. 2017. *Public Opinion and Foreign Policy*. Oxford University Press.
- Gadarian, Shana Kushner. 2010. “The politics of threat: How terrorism news shapes foreign policy attitudes.” *The Journal of Politics* 72(2):469–483.
- Ganter, Flavien. 2020. Identification of Preferences in Forced-Choice Conjoint Experiments: Reassessing the Quantity of Interest. Technical report SocArXiv.
- García-Alonso, María D.C. and Paul Levine. 2007. Chapter 29 Arms Trade and Arms Races: A Strategic Analysis. In *Handbook of Defense Economics*. Vol. 2 Elsevier pp. 941–971.

- Gerber, Alan S, Gregory A Huber, David Doherty and Conor M Dowling. 2011. "Citizens' policy confidence and electoral punishment: A neglected dimension of electoral accountability." *The Journal of Politics* 73(4):1206–1224.
- Goldsmith, Benjamin E and Yusaku Horiuchi. 2012. "In search of soft power: Does foreign public opinion matter for US foreign policy?" *World Politics* 64(3):555–585.
- Hager, Anselm and Hanno Hilbig. 2020. "Does Public Opinion Affect Political Speech?" *American Journal of Political Science* 64(4):921–937.
- Hainmueller, Jens, Daniel J. Hopkins and Teppei Yamamoto. 2014. "Causal Inference in Conjoint Analysis: Understanding Multidimensional Choices via Stated Preference Experiments." *Political Analysis* 22(1):1–30.
- Heinrich, Tobias, Yoshiharu Kobayashi and Leah Long. 2018. "Voters Get What They Want (When They Pay Attention): Human Rights, Policy Benefits, and Foreign Aid." *International Studies Quarterly* 62(1):195–207.
- Holden, Paul. 2017. *Indefensible: seven myths that sustain the global arms trade*. Bloomsbury Publishing.
- Irondele, Bastien, Frédéric Mérand and Martial Foucault. 2015. "Public Support for European Defence: Does Strategic Culture Matter?" *European Journal of Political Research* 54(2):363–383.
- Johns, Robert and Graeme A.M. Davies. 2012. "Democratic peace or clash of civilizations? Target states and support for war in Britain and the United States." *Journal of Politics* 74(4):1038–1052.
- Kertzer, Joshua D. 2020. "Re-Assessing Elite-Public Gaps in Political Behavior." *American Journal of Political Science* .

- Kertzer, Joshua D. and Dustin Tingley. 2018. "Political Psychology in International Relations: Beyond the Paradigms." *Annual Review of Political Science* 21(1):319–339.
- Kertzer, Joshua D., Kathleen E. Powers, Brian C. Rathbun and Ravi Iyer. 2014. "Moral Support: How Moral Values Shape Foreign Policy Attitudes." *The Journal of Politics* 76(3):825–840.
- Kertzer, Joshua D. and Thomas Zeitzoff. 2017. "A Bottom-Up Theory of Public Opinion about Foreign Policy." *American Journal of Political Science* 61(3):543–558.
- Kinne, Brandon J. 2016. "Agreeing to arm: Bilateral weapons agreements and the global arms trade." *Journal of Peace Research* 53(3):359–377.
- Koch, Lisa Langdon and Matthew Wells. 2021. "Still Taboo? Citizens' Attitudes toward the Use of Nuclear Weapons." *Journal of Global Security Studies* 6(3):ogaa024.
- Kolcava, Dennis, Lukas Rudolph and Thomas Bernauer. 2021. "Voluntary business initiatives can reduce public pressure for regulating firm behaviour abroad." *Journal of European Public Policy* 28(4):591–614.
- Krosnick, Jon A. 1989. "Attitude importance and attitude accessibility." *Personality and Social Psychology Bulletin* 15(3):297–308.
- Krotz, Ulrich. 2015. *History and Foreign Policy in France and Germany*. London: Macmillan.
- Lechner, Lisa. 2016. "The domestic battle over the design of non-trade issues in preferential trade agreements." *Review of International Political Economy* 23(5):840–871.
- Leeper, Thomas J., Sara B. Hobolt and James Tilley. 2020. "Measuring Subgroup Preferences in Conjoint Experiments." *Political Analysis* 28(2):207–221.

- Levine, Paul, Somnath Sen and Ron Smith. 1994. "A model of the international arms market." *Defence and Peace Economics* 5(1):1–18.
- Lippmann, Walter. 1922. *Public Opinion*. New York: Macmillan.
- Mutz, Diana C. 2011. *Population-based survey experiments*. Princeton University Press.
- Nincic, Miroslav and Jennifer Ramos. 2011. "Torture in the public mind." *International Studies Perspectives* 12(3):231–249.
- Nye, Joseph S. 1990. *Bound to Lead: The Changing Nature of American Power*. Basic Books.
- Onderco, Michal. 2017. "Public Support for Coercive Diplomacy: Exploring Public Opinion Data from Ten European Countries." *European Journal of Political Research* 56(2):401–418.
- Page, Benjamin I. and Robert Y. Shapiro. 1983. "Effects of Public Opinion on Policy." *American Political Science Review* 77(1):175–190.
- Pamp, Oliver, Lukas Rudolph, Paul W Thurner, Andreas Mehlretter and Simon Primus. 2018. "The build-up of coercive capacities: Arms imports and the outbreak of violent intrastate conflicts." *Journal of Peace Research* 55(4):430–444.
- Perkins, Richard and Eric Neumayer. 2010. "The organized hypocrisy of ethical foreign policy: Human rights, democracy and Western arms sales." *Geoforum* 41(2):247–256.
- Press, Daryl G, Scott D Sagan and Benjamin A Valentino. 2013. "Atomic aversion: Experimental evidence on taboos, traditions, and the non-use of nuclear weapons." *American Political Science Review* 107(1):188–206.

- Putnam, Robert D. 1988. "Diplomacy and domestic politics: the logic of two-level games." *International organization* 42(3):427–460.
- Rathbun, Brian C. 2007. "Hierarchy and Community at Home and Abroad. Evidence of Domestic and Foreign Policy Beliefs in American Elits." *Journal of Conflict Resolution* 51(3):379–407.
- Rathbun, Brian C and Rachel Stein. 2020. "Greater goods: morality and attitudes toward the use of nuclear weapons." *Journal of conflict resolution* 64(5):787–816.
- Rocklage, Matthew D and Russell H Fazio. 2018. "Attitude accessibility as a function of emotionality." *Personality and Social Psychology Bulletin* 44(4):508–520.
- Rudolph, Lukas, Dennis Kolcava and Thomas Bernauer. 2022. "Public demand for extraterritorial environmental and social public goods provision." *British Journal of Political Science* pp. 1–20.
- Rudolph, Lukas, Franziska Quoß, Romain Buchs and Thomas Bernauer. 2023. "Environmental concern leads to trade skepticism on the political left and right." *International Studies Quarterly* 66(5):sqac060.
- Schaffer, Lena Maria, Bianca Oehl and Thomas Bernauer. 2021. "Are Policymakers Responsive to Public Demand in Climate Politics?" *Journal of Public Policy* pp. 1–29.
- Schaffer, Lena Maria and Gabriele Spilker. 2019. "Self-interest versus sociotropic considerations: an information-based perspective to understanding individuals' trade preferences." *Review of International Political Economy* 26(6):1266–1292.
- Schuessler, Julian and Markus Freitag. 2020. "Power Analysis for Conjoint Experiments." *SocArXiv* . www.doi.org/10.31235/osf.io/9yuhp.

- Seawright, Jason. 2016. *Multi-method social science: Combining qualitative and quantitative tools*. Cambridge University Press.
- SIPRI. 2020. “Global Arms Industry: Sales by the Top 25 Companies up 8.5 per Cent; Big Players Active in Global South.”. <https://www.sipri.org/media/press-release/2020/global-arms-industry-sales-top-25-companies-85-cent-big-players-active-global-south>.
- Skitka, Linda J. 2010. “The psychology of moral conviction.” *Social and Personality Psychology Compass* 4(4):267–281.
- Smetana, Michal and Michal Onderco. 2022. “Elite-Public Gaps in Attitudes to Nuclear Weapons: New Evidence from a Survey of German Citizens and Parliamentarians.” *International Studies Quarterly* 66(2):sqac017.
- Turner, Paul W., Christian S. Schmid, Skyler J. Cranmer and Göran Kauermann. 2019. “Network Interdependencies and the Evolution of the International Arms Trade.” *Journal of Conflict Resolution* 63(7):1736–1764.
- Tomz, Michael, Jessica LP Weeks and Keren Yarhi-Milo. 2020. “Public opinion and decisions about military force in democracies.” *International Organization* 74(1):119–143.
- Tomz, Michael R. and Jessica L. P. Weeks. 2020. “Human Rights and Public Support for War.” *The Journal of Politics* 82(1):182–194.
- Vandeweerdt, Clara, Bart Kerremans and Avery Cohn. 2016. “Climate voting in the US Congress: the power of public concern.” *Environmental Politics* 25(2):268–288.
- Weaver, Alicia A. 2008. “Does protest behavior mediate the effects of public opinion on

national environmental policies? A simple question and a complex answer.” *International Journal of Sociology* 38(3):108–125.

Weber, Max. 1926. *Politik als Beruf*. Vol. 2 Duncker & Humblot.

Wezeman, Pieter d., Aude Fleurant, Alexandra Kuimova, Diego Lopes Da Silva, Nan Tian and Siemon T. Wezeman. 2020. “Trends in international arms transfers, 2019.”.

Wisotzki, Simone and Max Mutschler. 2021. “No common position! European arms export control in crisis.” *Zeitschrift für Friedens-und Konfliktforschung* 10(2):273–293.

Wlezien, Christopher. 1995. “The Public as Thermostat: Dynamics of Preferences for Spending.” *American Journal of Political Science* 39(4):981–1000.

Zhang, Kaiping. 2019. “Encountering dissimilar views in deliberation: Political knowledge, attitude strength, and opinion change.” *Political Psychology* 40(2):315–333.

Online Appendix for ‘Deontological and Consequentialist Preferences Towards Arms Exports’

A	Supplementary analysis and information	1
A.1	Polls on arms exports in Germany and France	2
A.2	Public Opinion and Foreign Policy Decision making	3
A.3	Research Design	4
A.3.1	Principles for Human Subjects Research	4
A.3.2	Exemplary conjoint screen	6
A.3.3	Sample Characteristics	7
A.4	Triangulating deontologist preferences	9
A.5	Operationalization of conjoint attributes	10
A.6	Additional Results	14
A.6.1	Statements of Motivations and War Attitudes for Rejectors	14
A.6.2	Bounds of Support	15
A.6.3	General Trade-Off	17
A.6.4	Interactions	21
A.6.5	German-French Differences	22
A.6.6	Voting and deontologists by vote intention	25
	Appendix A References	28
B	Pre-analysis plan	29

A.1 Polls on arms exports in Germany and France

Institute	Country	N	Method	Period	Russian invasion	In Favor	Against	Don't Know	Link
harris interactive	FR	2000	online	13.05. - 17.05.21	Before		78		https://www.amnesty.fr/presse/armes-etude-harris-une-nouvelle-enquete-revele
forsa	DE	1005	?	25.01. - 26.01.22	Before	22	69	9	https://www.presseportal.de/pm/154530/5132365
Forschungsgruppe Wahlen	DE	1249	tel	25.01. - 27.01.22	Before	20	73	7	https://www.forschungsgruppe.de/Umfragen/Politbarometer/Archiv/Politbarometer_2022/Januar_II_2022/
Infratest dimap	DE	1339	tel + online	31.01. - 02.02.22	Before	20	71	9	https://www.infratest-dimap.de/umfragen-analysen/bundesweit/ard-deutschlandtrend/2022/februar/
YouGov	DE	2036	online	04.02. - 08.02.22	Before	25	61	14	https://yougov.de/news/2022/02/18/knapp-drei-von-vier-deutschen-befurchten-auswirkun/
Forschungsgruppe Wahlen	DE	1224	tel	08.02. - 10.02.22	Before	20	75	7	https://www.forschungsgruppe.de/Umfragen/Politbarometer/Archiv/Politbarometer_2022/Februar_I_2022/
forsa	DE	1004	?	11.02. - 14.02.22	Before	29	61	10	https://www.presseportal.de/pm/154530/5147358
forsa	DE	1010	?	on 24.02.2022	During	30	59	11	https://www.presseportal.de/pm/154530/5155998
YouGov	DE	1314	?	25.02.-27.02.22	After	45	27	18	https://yougov.de/news/2022/03/02/zwei-von-drei-deutschen-fur-weitere-sanktionen-geg/
harris interactive	FR	1161	online	on 27.02.2022	After	71	29		https://harris-interactive.fr/opinion_polls/le-regard-des-francais-sur-la-guerre-entre-la-russie-et-lukraine/
forsa	DE	1002	?	on 28.02.2022	After	78	16	6	https://www.presseportal.de/pm/154530/5159234
Infratest dimap	DE	1320	tel + online	28.02. - 02.03.22	After	61	31	8	https://www.infratest-dimap.de/umfragen-analysen/bundesweit/ard-deutschlandtrend/2022/maerz/
forsa	DE	1001	?	04.03. - 07.03.22	After	60	29	11	https://www.presseportal.de/pm/154530/5165606
ifop	FR	1002/1011	online	03.03. - 07.03.22	After	65	20	15	https://www.ifop.com/wp-content/uploads/2022/03/118968-Rapport-09.03.2022.pdf
ifop	DE	1002/1011	online	03.03. - 07.03.22	After	66	23	6	https://www.ifop.com/wp-content/uploads/2022/03/118968-Rapport-09.03.2022.pdf
ifop	FR	1003	online	07.03. - 08.03.22	After	62	38		https://www.ifop.com/publication/les-francais-et-la-livraison-darmes-a-lukraine/
Forschungsgruppe Wahlen	DE	1345	tel	08.03. - 10.03.22	After	67	29	4	https://www.forschungsgruppe.de/Umfragen/Politbarometer/Archiv/Politbarometer_2022/Maerz_2022/

Figure A.1: Polls on arms exports in Germany and France around the Russian invasion of Ukraine in early 2022.

A.2 Public Opinion and Foreign Policy Decision making

While an ongoing debate, recent literature indicates that citizens hold reasoned preferences on foreign policy, and that their attitudes matter for government decision making. Going beyond the ignorant public assumption (see Lippmann 1922; Almond 1950) and elite cue models (see Berinsky 2007; Foyle 2017), Kertzer et al. (2014), Kertzer and Zeitzoff (2017), and Kertzer and Tingley (2018) highlight that the formation of foreign policy preferences is not much different from preference formation over domestic issues and that moral and personal values are central in this process (see also Rathbun 2007). Obviously, information asymmetries between elites and the mass public exist and are particularly relevant for foreign policy preference formation, especially in the age of digital media (Baum and Potter 2019). Hence, political leaders have relevant influence in leading opinion in foreign (but similarly domestic) policy (Agadjanian 2021). But also in foreign policy, as soon as issues become salient, information gaps likely close over time (Baum and Potter 2019), allowing citizens to hold leaders accountable and/or to select leaders that match their policy preferences (Tomz, Weeks and Yarhi-Milo 2020). Generally, a large body of research supports that public opinion matters in shaping policy debates and particularly the scope and form of political mandates for government action, and hence policymakers' decisions (Burstein 2003; Page and Shapiro 1983; Wlezien 1995). Policy processes appear responsive to both short and long-term shifts in public opinion (Bakaki, Böhmelt and Ward 2020; Schaffer, Oehl and Bernauer 2021). Exposure to public opinion polls can lead politicians to change both their priorities and positions in political speech (Hager and Hilbig 2020). Studies in the US and Europe indicate political elites follow the preferences of their constituents (e.g. Tomz, Weeks and Yarhi-Milo 2020; Vandeweerdt, Kerremans and Cohn 2016; Anderson, Böhmelt and Ward 2017; Weaver 2008). Hence, we conclude it is both theoretically worthwhile and practically relevant to study public opinion on arms transfers.

A.3 Research Design

A.3.1 Principles for Human Subjects Research

As our survey involves human participants, we made sure to conform with core principles for research with human subjects.

First, we provide some background on study participants. We work with participants from an opt-in online access panel of the survey company Kantar. Participants voluntarily sign up to the survey pool of Kantar via Kantars' webpage. Panel participants then get offered links to surveys from Kantar customers (mainly market research), as they did for ours. They can freely accept these links or not and complete these surveys at a time of their liking via their personal desktop, laptop, tablet or mobile devices. Upon completion of a survey, respondents get paid according to the time they spent for the survey with a payment scheme communicated to participants by Kantar.

Second, we provide information on how we obtained informed consent, whether deception was involved, how we preserve the anonymity of respondents, and whether there was a potential for harm. To obtain informed consent, we introduced respondents to the survey as follows (first screen of the survey, translated from German original; see master questionnaire for original of this and the following translated excerpts from the questionnaire):

Thank you for your interest in this survey. The survey is being conducted as part of a scientific study by the [blinded for peer review] university. Our aim is to better understand citizens' personal opinions on international issues. All answers you give are absolutely confidential and will be stored anonymously. It is not possible to identify you personally. It takes about 15 minutes to complete this survey. The survey has been approved by the Ethics Committee of the [blinded for peer review]. The survey serves purely scientific purposes. 1. I agree to participate in this survey. 2. Cancel

We did not deceive respondents. The broad study objective (scientific study on international issues) was communicated at the beginning, the detailed study objective towards the end of the survey (*With our study, we investigate the attitudes of citizens in Germany and France towards arms deliveries. To this end, the participants in this survey evaluated different hypothetical arms export measures.*). When entering the conjoint experimental part, respondents were made aware that they are about to evaluate hypothetical arms export decisions (*We are now interested in your opinion on very specific arms deliveries. The circumstances of the arms deliveries are kept general and not related to a specific case, a specific company or a specific recipient country, which is currently under political scrutiny.*)

As we work with an opt-in online access panel, the identity of study respondents is known only to Kantar. The socio-demographic information we gathered on respondents, while extensive, is not sufficient to allow for a de-anonymization of respondents based on covariates. Particularly, we have no information on respondent place of residence. We communicated strict anonymity of responses to respondents (see introductory statement, which was repeated towards the end as *As mentioned at the beginning, we store and evaluate the collected data in such a way that no conclusions can be drawn about individual respondents.*).

As we work with respondents over the age of 18 years, and as our survey instrument is only concerned with collecting basic socio-demographic information, general political values and attitudes and attitudes on weapons exports and related foreign policy issues, we see no potential for particular psychological stress for respondents by answering the questions we posed. Respondents also had the opportunity to quit the survey at any time.

Our procedure and survey instrument were approved by the Ethics Commission of [blinded].

A.3.2 Exemplary conjoint screen

Wir zeigen Ihnen nun das zweite Vergleichspaar von zwei Waffenlieferungen.

	Waffenlieferung 1	Waffenlieferung 2
Menschenrechtslage im Land?	Menschenrechte geachtet	Andersdenkende verfolgt/eingesperrt /gefoltert
Militärische Konflikte im Land?	Bürgerkrieg mit Rebellen	Konflikt mit Terroristen
Liefern andere Länder bereits Waffen?	Frankreich	Frankreich
Regierung im Land demokratisch gewählt?	Nicht demokratisch gewählt	Demokratisch gewählt
Handelt das Land Waren mit Deutschland?	Viel Handel von Waren	Viel Handel von Waren
Wirtschaftsvorteil für Deutschland in Millionen Euro insgesamt?	100 Mio.	1 Mio.
Wie viele Arbeitsplätze in Deutschland gehen ohne Lieferung verloren?	5000	5000
Was soll geliefert werden?	Kleinwaffen (z.B. Gewehre, Pistolen)	Militärische Aufklärungssysteme (z.B. Satellitentechnologie)
Ist das Land wichtig für die Sicherheit Deutschlands?	Wichtiger Sicherheitspartner	Kein wichtiger Sicherheitspartner

Wenn Sie sich zwischen einer der beiden Waffenlieferungen entscheiden müssten, welcher würden Sie persönlich den Vorzug geben und diese genehmigen?

☐

Waffenlieferung 1

☐

Waffenlieferung 2

Nun betrachten Sie beide Waffenlieferungen einzeln.

Auf einer Skala von 1 bis 7, auf der 1 bedeutet, dass die Waffenlieferung auf jeden Fall abgelehnt werden sollte und 7 bedeutet, dass die Waffenlieferung auf jeden Fall genehmigt werden sollte: Wie würden Sie die beiden Waffenlieferungen einschätzen?

Weiter »

Figure A.2: Survey screen with exemplary display of conjoint experiment (German version).

A.3.3 Sample Characteristics

Table A.1: Realised Quotas and Target Quotas (Source: Destatis/INSEE).

Variable	N	Percent	Target	N	Percent	Target
Education	3250			3367		
... Low	636	19.6%	19.5%	587	17.4%	23.4%
... Middle	1748	53.8%	54.5%	1644	48.8%	42.9%
... High	866	26.6%	25.9%	1136	33.7%	33.7%
Age	3250			3367		
... 18-24	315	9.7%	10.4%	390	11.6%	11.7%
... 25-34	530	16.3%	17.6%	549	16.3%	16.8%
... 35-44	529	16.3%	17.0%	597	17.7%	17.9%
... 45-54	670	20.6%	20.0%	644	19.1%	19.3%
... 55-64	710	21.8%	20.7%	625	18.6%	18.3%
... 65-120	496	15.3%	14.2%	562	16.7%	16.1%
Gender	3250			3367		
... Male	1590	48.9%	49.8%	1571	46.7%	48.8%
... Female	1653	50.9%	50.2%	1787	53.1%	51.2%
... Other	7	0.2%		9	0.3%	

Table A.2: Realised Regional Quotas and Target Quota (Source: Destatis/INSEE).

Variable	N	Percent	Target	Variable	N	Percent	Target
Germany	3250			France	3367		
... Baden-Württemberg	420	12.9%	13.3%	... Auvergne-Rhône-Alpes	426	12.7%	12.4%
... Bayern	520	16%	15.8%	... Bourgogne-Franche-Comté	144	4.3%	4.3%
... Berlin	144	4.4%	4.4%	... Bretagne	184	5.5%	5.1%
... Brandenburg	99	3%	3.0%	... Centre-Val de Loire	140	4.2%	3.9%
... Bremen	28	0.9%	0.8%	... Corse	10	0.3%	0.5%
... Hamburg	72	2.2%	2.2%	... Grand Est	293	8.7%	8.5%
... Hessen	243	7.5%	7.6%	... Hauts-de-France	320	9.5%	9.2%
... Mecklenburg-Vorpommern	67	2.1%	1.9%	... Île-de-France	576	17.1%	18.9%
... Niedersachsen	293	9%	9.6%	... Normandie	179	5.3%	5.1%
... Nordrhein-Westfalen	713	21.9%	21.6%	... Nouvelle-Aquitaine	320	9.5%	9.2%
... Rheinland-Pfalz	155	4.8%	4.9%	... Okzitanien	313	9.3%	9.1%
... Saarland	38	1.2%	1.2%	... Pays de la Loire	200	5.9%	5.9%
... Sachsen	166	5.1%	4.9%	... Provence-Alpes-Côte d'Azur	262	7.8%	7.8%
... Sachsen-Anhalt	91	2.8%	2.6%				
... Schleswig-Holstein	112	3.4%	3.5%				
... Thüringen	89	2.7%	2.6%				

Table A.3: Additional Respondent Characteristics.

Germany	Not NA	Mean	Sd	France	Not NA	Mean	Sd
Household Size	3250	2.268	1.604	Household Size	3367	2.652	2.667
Household Income	3072			Household Income	3184		
... 0-1000 Euro	250	8.1%		... 0-1000 Euro	299	9.4%	
... 1000-1750 Euro	451	14.7%		... 1000-1750 Euro	536	16.8%	
... 1750-2500 Euro	616	20.1%		... 1750-2500 Euro	655	20.6%	
... 2500-3500 Euro	735	23.9%		... 2500-3500 Euro	786	24.7%	
... 3500-5000 Euro	643	20.9%		... 3500-5000 Euro	547	17.2%	
... 5000-7500 Euro	189	6.2%		... 5000-7500 Euro	130	4.1%	
... 7500 Euro and more	188	6.1%		... 7500 Euro and more	231	7.3%	
Job Situation	3247			Job Situation	3357		
... Employed	1482	45.6%		... Employed	1466	43.7%	
... Part-time employed	481	14.8%		... Part-time employed	282	8.4%	
... In training, Student, in voluntary service or similar	203	6.3%		... In training, Student, in voluntary service or similar	156	4.6%	
... Currently unemployed/looking for work	133	4.1%		... Currently unemployed/looking for work	323	9.6%	
... Pensioner/retiree	713	22%		... Pensioner/retiree	770	22.9%	
... Housework, care of children or other persons	148	4.6%		... Housework, care of children or other persons	50	1.5%	
... Unable to work	69	2.1%		... Unable to work	118	3.5%	
... Other	18	0.6%		... Other	192	5.7%	
Perception of the Economic Situation (own)	3250	2.777	0.939	Perception of the Economic Situation (own)	3367	3.144	0.906
Perception of the Economic Situation (country)	3250	3.341	0.881	Perception of the Economic Situation (country)	3367	3.965	0.81
Political Interest	3250	2.578	1.04	Political Interest	3367	2.817	1.167
Left-Right Self-Assessment	3250	5.554	1.814	Left-Right Self-Assessment	3367	6.018	2.602
Party Choice	2962			Party Choice	2833		
... CDU/CSU	825	27.9%		... Rassemblement national	644	22.7%	
... SPD	470	15.9%		... La République en marche	408	14.4%	
... Die Grünen	597	20.2%		... Europe Ecologie - Les Verts	452	16%	
... DIE LINKE	292	9.9%		... Les Républicains	329	11.6%	
... FDP	209	7.1%		... La France insoumise de Jean-Luc Mélenchon	240	8.5%	
... AfD	322	10.9%		... Parti socialiste	307	10.8%	
... Other	247	8.3%		... Debout la France	128	4.5%	
				... Parti communiste français	73	2.6%	
				... Other	252	8.9%	

A.4 Triangulating deontologist preferences

To identify the prevalence of deontologist preferences, we combine two types of approaches, triangulating three data types. We consider this combination to provide for a reasonable lower bound for the share of deontologist preferences in our survey population.

The core challenge here is that any observed rejection of arms trades could come about both by principled or consequentialist rejection.

As a first approach to this challenge, we use the survey experimental variation in arms trades presented in the conjoint experiment to single out principled opposition. We propose that an expression of deontologist preferences reflects in fundamental opposition even to arms trades with context conditions highly favorable on all dimensions. This is, we identify the share of respondents rejecting arms trades (rating of 1, “reject in any case”) in the conjoint-experimental rating task even if these are presented as *at the same time* normatively appropriate (‘just war’ scenarios or peaceful democratic regimes), strategically beneficial, economically beneficial, of a defensive weapons type, with allied countries also trading.

Still, one could object that theoretically even more positive context conditions are possible, and that we could overestimate principled opposition. Hence, we provide for a second approach with four steps: In step one, we use the repeated nature of decision making in our conjoint experiment. We propose that respondents with deontologist preferences should reject all twelve (experimental) arms trades presented to them,²¹. Second, we zoom onto the experimental vignette condition with a normatively appropriate and economically beneficial arms trade in the 2x2 design. Deontologist respondents should also

²¹ We code rejection as a rating below the midpoint of the scale (‘reject’). As a robustness test, we also report the share with a maximum rating of 1 over all 12 tasks. This approach is on the one hand even more conservative. On the other hand, it might also underestimate deontologists as in a paired comparison, when confronted with starkly differing profiles, even deontologists might score slight differences in rating (at the rejecting end of the scale). Presenting both figures adds robustness to our findings.

disapprove this positive vignette. We term this group ‘rejectors’ (note that the group is defined for the experimental subgroup of respondents with this specific vignette condition only). Third, we propose that deontologist respondents should explicitly voice principled opposition as basis of their attitudes Skitka (2010). For this, we use open-ended text box answers to the experimental vignette. Human expert coders²² categorized responses into “deontologist”, “consequentialist”, “unclear” or “nonsensical” rejection (see Appendix Table A.6.1 for exemplary statements; among ‘rejectors’, 5.2% of responses were nonsensical). The share of deontologist respondents is then given by the share of respondents rejecting all twelve conjoint rating tasks, *and* disapproving the positively framed experimental vignette with a statement of principled opposition to arms trade. In a fourth step, we verify that deontologists state corresponding preferences in general attitude scales (Bizumic et al. 2013). Hence, we validate that deontologist respondents do not indicate consequentialist preferences in survey items tailored to general attitudes towards arms transfers (see questionnaire for exact wording), and voice fundamental disapproval of war in batteries of general attitudes towards war and peace. Last but not least, we would expect that deontologist respondents have a difficult time making choice decisions in the conjoint experiment – hence, we investigate whether their choices are attenuated towards zero in the conjoint experiment (see below). Overall, we propose that this triangulation provides for a sensible approximation to a hard-to-measure subgroup.

A.5 Operationalization of conjoint attributes

Our theoretical framework identified economic, security-related and normative dimensions of arms trade. Table 1 summarizes the attributes and attribute levels we chose to operationalize these dimensions. This Appendix Subsections provides details on our

²² Inter-coder reliability of deontologist and consequentialist statements was at 69.05%.

operationalization.

Concerning the economy, in Germany, the gross value added of the defense and security industry was 12.2 billion Euro in 2014 (0.4% of GDP). Estimates of direct employment range between 98,000 and 135,700 (Hartley & Belin 2020), of indirect employment to 273,400 jobs, amounting to 1% of overall employment in 2014 (Ostwald & Legler 2015). Similarly in France, the armament industry employs around 160,000 people, with 400,000 employed in the broader defense sector (1,3% of total employment) in 2018 (Ministère de l'Europe et des Affaires Étrangères 2018). We thus derive two economic dimensions: the gross welfare added (welfare gains for business, employees or the public sector) and employment consequences. As detailed information on the value of single arms export decisions is not publicly available, aggregate-level data from government arms export reports constitute a realistic heuristic (Bundesministerium für Wirtschaft und Energie 2019; Ministère des Armées 2020) – especially, as these also form the basis for how the media reports on the economic value of arms deals (e.g. Pauly & Steinmetz 2018). Thus, we use the smallest and largest overall arms exports by recipient countries in 2019 as the range to obtain realistic levels, i.e. monetary values from 1 million to 1 billion Euro. While a much more tangible materialistic dimension, the number of jobs at risk if the export does not get authorized is even more difficult to pin down. In the only study available, Martin et al. (1999) state that for the UK, a 1/3rd reduction in arms exports would result in a 13-40k job loss per year. As this does not translate to singular export decisions, 5,000 jobs seems like a more realistic upper bound – corresponding to a medium-sized firm in the arms sector (e.g. Fleurant & Quéau 2014: 7). Consequently, we presented levels ranging from 100 to 5,000 jobs. Additionally, arms trade allows countries to establish and expand existing (diplomatic) relationships that can be leveraged to foster ties (Pierre 1981), for example for the trade in non-military merchandise. This is a third relevant economic

dimension we add to the conjoint experiment.

Different to the trade of normal goods, security externalities are also considered to play a non-negligible role in every arms transfer, preventing governments from considering exclusively economic incentives (García-Alonso and Levine 2007). Concerning the security aspect of arms trade, negative and positive security externalities link to factors such as alliance status, which we capture with an attribute whether the seller is in a security partnership with the target country of a weapons deal (or not).

Concerning the normative dimension of arms trade, recent studies highlighted the role of norms as well as national and international regulatory regimes (Schulze et al. 2017; Blanton 2000, 2005; Erickson 2015). we relate to international regulatory regimes, such as the UN Arms Trade Treaty. These regulatory commitments highlight regime type, human rights situation and conflict status of the importing country as central dimensions from which prohibition rules and guidelines are derived. While non-bindingness or legal vagueness often leaves considerable discretion in terms of compliance, states appear to respond to social incentives and domestic or international reputation benefits – either based on strategic signaling motivations or intrinsic motivations (Erickson 2015). Thus, the regime type (democratic or non-democratic) of the receiving country, the human rights situation in the receiving country, and the conflict situation constitute another three dimensions of arms trade. To capture the human rights situation in an importing country, three levels are chosen based on established measures of human rights practices which combine measures of physical integrity and empowerment rights (Gibney et al. 2020; Cingranelli et al. 2014). Specifically, we discriminate between no violations of human rights (Human rights respected), suppression of empowerment rights (Freedom of expression suppressed), and stark physical integrity violations (Dissidents persecuted/incarcerated/tortured). Conflict status is manipulated to take on common types of conflict situations in which the

importing country acts both defensively and aggressively, with “Peace in the country” as the natural baseline. The regime type of a country is presented as a binary distinction whether the government is elected democratically or not.

Finally, we turn to out two moderating attributes, weapons type and international competition: We also introduce two attributes which serve to test the moderation of economic and moral attributes. On the one hand, this is the weapons type: Norm compliance could be conditional on the type of military equipment to be exported and its potential for offensive or defensive military purposes (Johnson & Willardson 2018). We operationalize the the former as weapons with direct physical harm potential (large weapons and small arms) compared to weapons with a more indirect use (protective equipment, surveillance technology) (c.f. Johnson & Willardson 2018). This should also prevent respondents from inferring the weapon type and its harm potential from the monetary value of the deal. On the other hand, there is the international level playing field and the relevance of other states’ behavior in alleviating moral concerns and activating a strategic or economic logic of decision making. We operationalize the latter by communicating, from a natural baseline of “unknown”, whether other countries (allied, i.e. either NATO-partners or France/Germany, or opposing nations, i.e. China and Russia) are also trading arms with this country.

A.6 Additional Results

A.6.1 Statements of Motivations and War Attitudes for Rejectors

No.	Respondent statement	Translation
Consequentialist rejection		
1	pourquoi fournir des armes à un pays en paix?	why supply weapons to a country at peace?
2	Weil ich Waffenlieferungen grundsätzlich als Kriegstreiberei verstehe. Der Frieden des jeweiligen Landes ist viel höher zu bewerten, als Arbeitsplätze im eigenen Land. Waffen zu liefern erachte ich nur im äussersten, verzweifelten Notfall eines Landes als begründet.	Because I fundamentally understand arms deliveries as warmongering. The peace of the respective country is much more important than jobs in one's own country. I consider supplying weapons to be justified only in the extreme, desperate emergency of a country.
3	Ich finde es muss andere Möglichkeiten geben. Ohne Waffen sollte es doch auch gehen.	I think there must be other possibilities. It should also be possible without weapons.
Fundamental rejection		
4	PAS D ARMES C EST DANGEREUX	NO WEAPONS IT IS DANGEROUS
5	Waffen sollten generell nicht produziert werden. Das Geld sollte für die Unterstützung ärmerer Länder verwendet werden.	Weapons should generally not be produced. The money should be used to support poorer countries.
6	ich bin überhaupt gegen Waffenlieferungen	I am against arms deliveries at all
Unclear		
7	Trop d'armes en France	Too many weapons in France
8	insécurité future	future insecurity
9	Schade das die politik mit waffen geschäfte macht, leider geht es da nur um Geld und Macht. Der Mensch interessiert da wenig bus garnicht.	It's a pity that politics does business with weapons, unfortunately it's all about money and power. The human being is of little or no interest.

Table A.4: Examples of statements from open text box on motivations for rejection of a high-value arms transfer to a human-rights abiding democratic country context

Figure A.3: Responses to general attitudes towards war for rejectors in conjoint

A.6.2 Bounds of Support

To further illustrate the bounds of support, we also generated predicted ratings for the entire treatment universe. Table A.5 shows average support (rating outcome) for four selected arms transfers in the pooled sample: the ones yielding the highest and lowest average support (which also are those theoretically most/least favorable; these would be akin to exports between Germany and France, and, respectively, akin to recent exports of armored vehicles produced by German manufacturers to Azerbaijan), one that represent a morally unfavorable and economically favorable context (akin to recent salient arms transfers to Saudi-Arabia²³) and one that represents a morally favorable and economically not favorable context (akin to an exemplary export to Costa Rica).

²³ The arms transfers salient in the broader context of the Kashoggi killing and the Yemen war were sizable in their monetary value (see, e.g. Gonzalez 2019). Saudi Arabia is arguably an important trade and security partner for both countries.

Table A.5: Predicted average support for specific arms transfers (rating outcome).

Transfer	Prediction	95% CI
<i>Least favorable – empirical analogy: Azerbaijan</i>		
Not democratically elected; Dissidents persecuted/incarcerated/tortured; Country at war, attacks; Not an important partner; Little trade of goods; 1 m; 100; Large weapons (e.g. tanks, aircraft, ships); China and Russia	2.198	2.143-2.253
	<i>Germany</i>	
	1.844	1.766-1.922
	<i>France</i>	
	2.531	2.455-2.607
<i>Unfavorable human rights/ conflict context, favorable economic/security context: empirical analogy: Saudi Arabia</i>		
Not democratically elected; Dissidents persecuted/incarcerated/tortured; Country at war, attacks; Important partner; A lot of trade of goods; 1000 m (1 bn); 5000; Large weapons (e.g. tanks, aircraft, ships); NATO partners (USA, UK, {France/Germany})	2.82	2.762-2.875
	<i>Germany</i>	
	2.506	2.426-2.586
	<i>France</i>	
	3.116	3.038-3.193
<i>Favorable human rights/conflict context, unfavorable economic/security context: empirical analogy: Costa Rica</i>		
Democratically elected; Human rights respected; Peace in the country; Not an important partner; Little trade of goods; 1 m; 100; Small arms (e.g. rifles, pistols); Unknown	3.57	3.511-3.624
	<i>Germany</i>	
	3.453	3.373-3.534
	<i>France</i>	
	3.682	3.603-3.76
<i>Most favorable: empirical analogy: France/Germany</i>		
Democratically elected; Human rights respected; Peace in the country; Important partner; A lot of trade of goods; 1000 m (1 bn); 5000; Military protective equipment; NATO partners (USA, UK, {France/Germany})	4.232	4.175-4.289
	<i>Germany</i>	
	4.144	4.062-4.226
	<i>France</i>	
	4.325	4.247-4.404

Note: Predictions are based on a simple OLS model of the rating outcome on the level-indicators. Confidence intervals are robust 95% confidence intervals.

A.6.3 General Trade-Off

Figure A.4: Marginal means for all attributes. For AMCEs see Figure 5.

Figure A.5: AMCEs for the rating outcome.

Figure A.6: ACPs (Ganter 2020) for the forced-choice outcome and for all attributes.

Figure A.7: CAMCEs and differences in CAMCEs by deontologist vs. consequentialist respondents.

A.6.4 Interactions

Figure A.8: Interaction of economic value with norm related attributes.

Figure A.9: Interaction of weapon type with norm and economic related attributes.

A.6.5 German-French Differences

Figure A.10: MMs by country and country difference for all attributes.

Figure A.11: AMCEs by country and country difference for all attributes.

Figure A.12: Distribution of ratings over different arms trade profiles by country. Low value indicates: 100 jobs secured, 100m or 1bn economic revenue created. High value: 5000 jobs secured, 1m or 10m economic revenue. Bad governance/conflict situation: Autocratic regime, severe human rights violations, country at war (attacks), delivery of small or large weapons. Good governance/conflict situation: Democratic regime, human rights respected, peace in country, delivery of protective equipment or military surveillance technology. The distributions average over additional, non-expressed attributes.

A.6.6 Voting and deontologists by vote intention

Table A.6: Issue importance of arms trade for election decision

	Rejector w/ maxrating = 1		Rejector w/ maxrating = 3	
	(1)	(2)	(3)	(4)
	Issue importance	Issue importance	Issue importance	Issue importance
PID party evaluated=1	0.544*** (0.0417)	0.541*** (0.0416)	0.524*** (0.0436)	0.520*** (0.0435)
Deontologist resp.=1	0.166+ (0.0847)	0.154+ (0.0845)	0.250*** (0.0661)	0.231*** (0.0661)
PID party evaluated=1 × Deontologist resp.=1	0.579*** (0.146)	0.585*** (0.146)	0.424*** (0.108)	0.432*** (0.108)
low value, autocracy		0.0443 (0.0553)		0.0402 (0.0552)
high value, democracy		-0.186*** (0.0553)		-0.179** (0.0552)
low value, democracy		-0.240*** (0.0553)		-0.232*** (0.0552)
Constant	3.560*** (0.0267)	3.658*** (0.0432)	3.532*** (0.0279)	3.629*** (0.0440)
N	6617	6617	6617	6617
r ²	0.0370	0.0425	0.0418	0.0468

Standard errors in parentheses

+ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Note: Respondents were asked on the importance of positions of party X on arms trade for their election decision (outcome), experimentally varying whether they reply for the electoral importance of the position of their (on other grounds) preferred party (“PID party”) vs. any other party. Question wording: “There are many other political issues besides arms deliveries. How important or unimportant is it to you in your election decision how [party] stands on arms deliveries?” Models 3 and 4 control for vignette conditions (as question was asked post-treatment). Models 1 and 2 report results for deontologists approximated as “rejectors” (respondents rejecting arms trades in all 12 rating tasks and the vignette) with maximum rating of 1, models 3 and 4 with a maximum rating of 3.

Table A.7: Germany: Rejectors and Party Support

	Rejectors		Total
	Not a rejector	n Rejectors	
Vote Intention			
AfD	268 (83%)	54 (17%)	322 (100%)
CDU/CSU	733 (89%)	92 (11%)	825 (100%)
DIE LINKE	192 (66%)	100 (34%)	292 (100%)
FDP	188 (90%)	21 (10%)	209 (100%)
Grüne	431 (72%)	166 (28%)	597 (100%)
SPD	394 (84%)	76 (16%)	470 (100%)
N/A	206 (72%)	82 (28%)	288 (100%)
Others	167 (68%)	80 (32%)	247 (100%)
Total	2,579 (79%)	671 (21%)	3,250 (100%)

Note: Deontologists approximated as “rejectors” (respondents rejecting arms trades in all 12 rating tasks and the vignette) with a maximum rating of 3.

Table A.8: France: Rejectors and Party Support

	Rejectors		Total
	Not a rejector	n Rejectors	
Vote Intention			
Debout la France	116 (91%)	12 (9.4%)	128 (100%)
Europe Ecologie - Les Verts	371 (82%)	81 (18%)	452 (100%)
La France insoumise de Jean-Luc Mélenchon	201 (84%)	39 (16%)	240 (100%)
La République en marche	379 (93%)	29 (7.1%)	408 (100%)
Les Républicains	312 (95%)	17 (5.2%)	329 (100%)
Parti communiste français	62 (85%)	11 (15%)	73 (100%)
Parti socialiste	256 (83%)	51 (17%)	307 (100%)
Rassemblement national	599 (93%)	45 (7.0%)	644 (100%)
N/A	430 (81%)	104 (19%)	534 (100%)
Others	204 (81%)	48 (19%)	252 (100%)
Total	2,930 (87%)	437 (13%)	3,367 (100%)

Note: Deontologists approximated as “rejectors” (respondents rejecting arms trades in all 12 rating tasks and the vignette) with a maximum rating of 3.

Appendix A References

- Banerjee, A., Duflo, E., Finkelstein, A., Katz, L. F., Olken, B. A., & Sautmann, A. (2020). In praise of moderation: Suggestions for the scope and use of pre-analysis plans for rcts in economics. Tech. rep., National Bureau of Economic Research.
- Blanton, S. L. (2000). Promoting Human Rights and Democracy in the Developing World: U.S. Rhetoric versus U.S. Arms Exports. *Am J of Pol Sc*, 44(1), 123.
- Blanton, S. L. (2005). Foreign Policy in Transition? Human Rights, Democracy, and U.S. Arms Exports. *International Studies Quarterly*, 49(4), 647–668.
- Bundesministerium für Wirtschaft und Energie (2019). Bericht der Bundesregierung über ihre Exportpolitik für konventionelle Rüstungsgüter im Jahre 2019.
- Cingranelli, D. L., Richards, D. L., & Clay, C. K. (2014). The ciri human rights dataset. URL <http://www.humanrightsdata.com>
- Erickson, J. (2015). *Dangerous Trade: Arms Exports, Human Rights, and International Reputation*. Columbia University Press.
- Fleurant, A.-E., & Quéau, Y. (2014). *Die französische Rüstungsindustrie: Strategische Autonomie mit Hindernissen*, vol. 15 of *DGAP-Analyse*. Berlin.
- García-Alonso, M. D., & Levine, P. (2007). Chapter 29 Arms Trade and Arms Races: A Strategic Analysis. In *Handbook of Defense Economics*, vol. 2, (pp. 941–971). Elsevier.
- Gibney, M., Cornett, L., Wood, R., Haschke, P., Aron, D., Pisano, A., & Beakkwan, P. (2020). The political terror scale 1976-2019.
- Gonzalez, J. C. (2019). German export policies threaten european defense projects: French ambassador. Deutsche Welle.

- Hartley, K., & Belin, J. (Eds.) (2020). *The Economics of the Global Defence Industry*. 16. Routledge.
- Johnson, R. A. I., & Willardson, S. L. (2018). Human Rights and Democratic Arms Transfers: Rhetoric Versus Reality with Different Types of Major Weapon Systems. *International Studies Quarterly*, 62(2), 453–464.
- Martin, S., Hartley, K., & Stafford, B. (1999). The economic impacts of restricting UK arms exports. *International Journal of Social Economics*, 26(6), 779–802.
- Ministère de l'Europe et des Affaires Étrangères (2018). Defence industries and technologies. <https://www.diplomatie.gouv.fr/en/french-foreign-policy/economic-diplomacy-foreign-trade/supporting-french-businesses-abroad/strategic-sector-support/defence-industries-and/>.
- Ministère des Armées (2020). Rapport au Parlement sur les exportations d'armement de la France.
- Ostwald, D. D. A., & Legler, B. (2015). Der Ökonomische Fußabdruck der deutschen Sicherheits- und Verteidigungsindustrie (SVI). (p. 45).
- Pauly, M., & Steinmetz, V. (2018). Deutschlands Geschäft mit dem Krieg. Spiegel.
- Pierre, A. J. (1981). Arms sales: the new diplomacy. *Foreign Aff.*, 60, 266.
- Schulze, C., Pamp, O., & Thurner, P. W. (2017). Economic Incentives and the Effectiveness of Nonproliferation Norms: German Major Conventional Arms Transfers 1953–2013. *International Studies Quarterly*, 61(3), 529–543.

B Pre-analysis plan

The core theoretical argument, empirical approach (including power analysis), and survey instrument were extensively pre-registered via Open Science Foundation (<https://osf.io/uewrt/>).

Note that this pre-registration proposes additional experiments (e.g. an additional vignette on motivations) and additional hypotheses (e.g. on how foreign policy values affect preference formation on arms trade) that are not analyzed in this manuscript draft, but that we work to report on in additional scientific work.

Following Banerjee et al. (2020) we report in this manuscript some analyses not registered with the pre-analysis plan. For example, while we registered moderating effects of weapon type, other states trading (international competition), and fellow democratic contexts affecting strategic considerations, we now test additional expectations on how different types of war should affect normative considerations (as included now in the manuscript). As well, we included an experimental vignette to test the importance of the arms trade issue when evaluating one's on other grounds preferred party vs. any other party, which we now analyze by deontologist vs. consequentialist respondents.