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DISCUSSION PAPER

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Left-Wing Butter vs. Right-Wing Guns – Government Ideology and Disaggregated Military Expenditures

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LEFT-WING BUTTER VS. RIGHT-WING GUNS – GOVERNMENT IDEOLOGY AND DISAGGREGATED MILITARY EXPENDITURES

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Abstract

This article demonstrates that the influence of government ideology on military expenditures is more nuanced than it was shown in previous research and using only aggregated military expenditures may provide ambiguous results. The disaggregation of military expenditures allows concluding that in the 29 studied EU and NATO countries, right-wing governments tend to spend more on military equipment and arms purchases, while left-wing governments tend to spend more on military personnel. Government ideology may also create compositional political budgetary cycles, due to the fact that left-wing governments fighting for re-election significantly increase personnel expenditures in election years, while right-wing governments spend significantly more on arms for soldiers. Moreover, using a newly created dataset of election results in 510 municipalities or constituencies with military bases in 29 EU and NATO countries allows concluding that governments with above-average support of military-related voters in previous elections spend more on the military during the entire term, which suggest that ruling politicians support their core voters.

JEL codes: H56, H76

Keywords: economic theory of alliances, peace and defence economics, military burden

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1. Introduction

After the end of the Cold War and the dissolution of the Warsaw Pact, European countries experienced a period of relative peace and security, known as peace dividend or peace bonus. Military expenditures were gradually reduced and they were not a salient policy issue. It was only when Russia annexed Crimea and the war in Donbas broke out that the issue of military expenditures grew in importance, and Russia's full-scale invasion on Ukraine in February 2022 made military expenditures a major topic of the public debate, policy-makers' analyses and economic research.

Currently, one of the most important issues in studies over the size of military expenditures is an attempt to answer the question of what caused the drop in military expenditures throughout all EU and European members of NATO after 2008, and why some countries reduced military expenditures more than others. One of the most commonly addressed issues is the effect of external and internal threats on the level of military expenditures (e.g. Dunne et al. 2008; Odehnal & Neubauer 2018) as well as burden-sharing in the NATO alliance and potential existence of free-riding among smaller allies (e.g. Sandler & Shimizu 2012; Spangler 2017; George & Sandler 2018; Kim & Sandler 2023). Another issue is the effect of fiscal tightenings and austerity policies after the Great Recession of 2008 and after the debt crises of many European countries on the level of their military expenditures (e.g. Capella Zielinski et al. 2017; Becker 2019; Alozious 2021).

Dozens of works provide convincing results indicating that military expenditures are the function of external threats, internal threats (separatism, terrorism, etc.) and the economic situation of a given country, including most of all its fiscal capacity resulting from the level of deficit and debt. Less attention is paid to institutional and political factors affecting the levels of military expenditures, particularly in developed and democratic countries. This article contributes to the literature by analysing the potential influence of government ideology, political budgetary cycles related with ideology of governments fighting for re-election and transfers to core voters related to the military on military expenditures in 29 European countries (27 EU members plus Norway and the United Kingdom) in the years 1999-2022 from the political economy perspective.

Firstly, previous research on the effect of government ideology on the level of military expenditures indicated that right-wing governments spend more (e.g. Bove et al. 2017; Kuokštytė et al. 2020), or produced insignificant results (Potrafke 2010; Kauder & Potrafke 2015; Kofroň & Stauber 2021). However, the said research used aggregated military expenditures, and, as noted by Whitten and Williams (2010), the influence of government ideology on military expenditures is unclear. On the one hand, right-wing (left-wing) governments have a more hawkish (dovish) stance on foreign policy, which induces an increase (a reduction) of military expenditures. On the other hand, they usually implement a more restrictive (expansionary) fiscal policy, which induces a reduction (an increase) of military expenditures. The disaggregation of military expenditures into three categories presented in this article allows obtaining a clearer picture: left-wing governments spend more on military personnel, while right-wing governments spend more on military equipment and arms purchases. The guns versus butter dilemma may exist also in expenditures usually considered as "gun" expenditures: the decision-maker must choose between paying more to soldiers and buying new arms.

Secondly, government ideology may also influence political budgetary cycles. Existing studies show that in the year of parliamentary election military expenditures are significantly lower (e.g.

Bove et al. 2017; Kuokštytė et al. 2020), or provide statistically insignificant results (Klomp 2023, among others). Ambiguous results may be a consequence of using aggregated military expenditures. Since left-wing governments spend more on personnel and less on armaments (and right-wing governments do the opposite), applying aggregated military expenditures does not show the compositional political budgetary cycle. This article provides results suggesting that left-wing and centrist governments fighting for re-election increase personnel expenditures and cut equipment expenditures in the election year, while right-wing governments do the opposite. The overall effect of the election year on total military expenditures is insignificant.

Thirdly, the existing theoretical models and empirical studies have treated public security as purely public good (i.e. non-rivalrous and non-excludable good). This article to some extent undermines such assumption: although all citizens benefit from public security, these expenditures are at the same time transferred to certain interest groups (soldiers and their families, civilian personnel in the military, defence industry and related industries, inhabitants of municipalities located close to military bases). Therefore, politicians can use military expenditures to gain or maintain support among voters from such groups. This article uses newly collected and previously unused data on support for the ruling coalition in municipalities or constituencies that have a military base in their territory, from a total of 510 military bases in 29 EU-NATO countries for parliamentary elections in the years 1999-2022. The results of the estimation indicate that governments with above-average support in municipalities with military bases spend more on military personnel and military equipment. Moreover, the results suggest that left-wing governments with high support among military-related voters significantly increase military personnel expenditures and decrease equipment expenditures, while right-wing governments primarily increase equipment expenditures.

The rest of this article is organised as follows. Section 2 presents a literature review of factors determining the level of military expenditures. Section 3 describes the data applied to verify the research hypotheses. Section 4 describes empirical strategy used to obtain the results presented in Section 5. Section 6 provides conclusions.

2. Literature review

Research on the factors that determine demand for military expenditures has been conducted since the time of the Cold War and the rivalry between NATO and Warsaw Pact countries. For this reason, the first models were based on game theory and described the reactions of the participants of the arms race to the military expenditures of their rivals (Richardson 1960) and allies (Olson & Zeckhauser 1966), which later on served as a basis for the joint product model of an alliance (e.g. Murdoch & Sandler 1984). Over time, along the arms races models, there emerged new models from the neo-classical approach, which considers the country or state as maximising a social welfare function with security as an integral component, where the demand for military expenditure is a function of economic resources, threats to security, and political factors (Dunne & Perlo-Freeman 2003). Such models are based on the Security Web concept created by Rosh (1988), according to which military expenditures of every country are a result of military expenditures of neighbours and other countries that can affect a nation's security (such as regional or great powers).

Based on such and other models, numerous empirical studies have been created. Dunne and Perlo-Freeman (2003) and Dunne et al. (2008) confirm that military expenditures of each country

are heterogeneous and linked with the military expenditures of countries in the security web. Similar conclusions are reached by Skogstad (2015) and Yesiliurt and Elhorst (2017) using spatial methods.

Studies on the military expenditures of European countries most often mention the threat from Russia, especially after the invasion on Georgia (2008), annexation of Crimea, start of the war in Donbas (2014), and the full-scale invasion on Ukraine (2022). Kuokštytė et al. (2020) and George and Sandler (2018) have demonstrated that, in response to the increase of Russian military expenditures, the countries that have been increasing their military expenditures the most are the ones bordering Russia or located the closest to Russia; and the further away from Russia, the weaker the effect is. Other European NATO states did not respond with similar increases, and even reduced their military expenditures, while Russian military expenditures kept rising (George & Sandler 2018; Haesebrouck 2021; Kim & Sandler 2023). Other potential threats to European NATO members may include international terrorism (Kuokštytė et al. 2020) and hybrid threats (Balcean et al. 2021).

The level of military expenditures in European countries may be affected not only by the military expenditures of their potential enemies, but also the military expenditures of their allies. According to the model of Olson and Zeckhauser (1966), in a defensive alliance such as NATO (where attacking one ally is tantamount to attacking all members), security is a purely public good, which benefits everyone involved to the same degree. Security is mostly financed by the larger (richer) countries, and so the smaller (poorer) countries can free-ride. This model is based on deterrence as part of the nuclear MAD (Mutual Assured Destruction) strategy. The 1967 shift in NATO's strategy to Flexible Response was followed by the emergence of joint product models, which take into account impurely public protective benefits (e.g. Murdoch & Sandler 1984). Although deterrence is a pure public good in and of itself, each ally may have excludable benefits resulting from increasing military expenditures, such as reduction of potential destruction in the case of an enemy attack or protection of trading routes. If such benefits are complimentary towards deterrence, then free-riding disappears.

The military burden-sharing within NATO has been the subject of studies for decades. Works based on older time series do not indicate the existence of free-riding within NATO (Sandler & Murdoch 2000; Gadea et al. 2004; Nikolaidou 2008; Sandler & Shimizu 2012); however, studies using newer time series do point to free-riding in NATO (Kuokštytė et al. 2020; Kim & Sandler 2019, 2023; Alozious 2021; George & Sandler 2022). This would mean that this phenomenon has been present mostly since the time of the Great Recession of 2008. Allen et al. (2016) argue that the presence of US military within the territories of NATO countries causes such countries to increase their military expenditures; however, Spangler (2017) indicates that the military expenditures of the USA and European NATO members are substitutional and not complimentary. Blum and Potrafke (2019) claim that European NATO countries which experienced a large shift in their governments between 2014 and 2018 have been increasing their military expenditures at a lower rate. Plümper and Neumayer (2014) argue that larger countries spend more on the military due to their more active foreign policies and activities not resulting from NATO defence measures, while smaller countries focus solely on security. In turn, Pamp et al. (2018) show that democratic countries which export large amounts of arms to their allies spend less on their military.

Apart from external and internal threats, the level of military expenditures in European countries is also affected by economic factors. GDP growth leads to an increase in military

expenditures (e.g. George & Sandler 2018) due to the fact, among other things, that richer countries have more resources to protect (Nikolaidou 2008). Larger trade exchange leads to a decrease of probability of an armed conflict – trade does promote peace (Hegre et al. 2010). Capella Zielinski et al. (2017) have demonstrated that the response of military expenditures to GDP changes is asymmetrical: in the recession phase, they are significantly reduced; and in the growth period, they rise slowly. Therefore, the process of returning to military expenditure levels from before a crisis is a slow one. Such situation can be seen in EU and NATO countries after the Great Recession. It is considered that the main causes of the slow increase of military expenditures after 2008 include debt crises, a high level of public debt, and stringent fiscal rules (Becker 2019; Odehnal & Neubauer 2018; Alozious 2021).

The last group of factors affecting the level of military expenditures are internal political and institutional factors. Many research work prove that democratic countries spend less on the military than authoritarian countries (e.g. Allen et al. 2012). In democratic countries, the median voter's preferences typically tilt towards social expenditures (Bove et al. 2017); whereas in authoritarian countries, military expenditures are an instrument a dictator can use to stay in power (Bove & Brauner 2014). Democratic countries usually experience fewer external threats (Hauenstein et al. 2021), while the transition from a dictatorship to a democracy entails a drop in military expenditures (Blum 2018, 2021). The kind of democracy is also of significance, because, according to Albalate et al. (2012) and Bove and Nisticò (2014), presidential democracies spend more than parliamentary democracies; the case is similar in countries with majority rule. In addition, a larger influence of the military on politics leads to an increase of military expenditures (Bove & Nisticò 2014, Carter 2023), and successful coups lead to a subsequent increase in spending on the military (Leon 2013).

Military expenditures have been also studied for the presence of the political budgetary cycle. A meta-analysis conducted by Klomp (2023) provides very ambiguous results. On the one hand, the incumbent government may try to improve the odds of being re-elected by boosting the economy. On the other hand, it might be more favourable for the ruling cabinet to cut defence spending in an election year to finance expansions in other public spending categories. The results of the meta-analysis show only a weak negative genuine effect of elections on military expenditures. This effect, however, is positive in countries with a developed arms industry and in countries dealing with serious security risks. A drop in military expenditures in the year of parliamentary election is demonstrated in a study by Kuokštytė et al. (2020) conducted on a sample of 28 EU countries in the years 1993-2017. Bove et al. (2017), in a study conducted on a sample of 22 OECD countries from the years 1988-2009, show a drop in military expenditures in the election year in favour of social expenditures. In the election year, governments send fewer soldiers to foreign missions (Buts et al. 2017).

The last important factor which may influence the size of factors in democratic countries is government ideology. As has been noted by Whitten and Williams (2010), the effect of government ideology on military expenditures is ambiguous. On the one hand, right-wing (left-wing) governments have a more hawkish/dovish stance on foreign policy, which induces an increase (a reduction) of military expenditures. On the other hand, they usually implement a more restrictive (expansionary) fiscal policy, which induces a reduction (an increase) of military expenditures. Many studies show that in the end right-wing governments spend more on the military (Kuokštytė et al. (2020) on a sample of 28 EU countries, Bove et al. (2017) on a sample of 22 OECD countries,

Whitten & Williams (2010) on a sample of 19 developed countries, and Karagol & Turhan (2008) on the case study of Turkey). The works of Potrafke (2010) conducted on a sample of 23 OECD countries and the works of Kauder and Potrafke (2015) on the case study of Germany point to a lack of influence of government ideology on the amount of military expenditures. It must be noted here that all the mentioned works use only aggregated military expenditures within the SIPRI or OECD methodology. To the best of the author's knowledge, there is no research work using disaggregated military expenditures to measure how government ideology affects disaggregated military expenditures and how the interaction between the election year and government ideology influences selected categories of military expenditures.

3. Data

The aim of this article is to verify hypotheses concerning the influence of government ideology on disaggregated categories of military expenditures; the influence of government ideology on a potential compositional budgetary cycle and the effect of support for the government in municipalities or electoral constituencies with military bases on military expenditures. For the research sample, 29 EU-NATO countries in the period 1999-2021 were selected. Data from before 1999 is unavailable for most of the studied countries. Apart from the 27 EU member states, the sample also includes the United Kingdom and Norway. The United Kingdom is a NATO member and was an EU member until 2020. In turn, Norway is not an EU member; however, it is closely linked to the EU economically (EFTA, EEA, Schengen Agreement) and militarily (it is one of the founding members of NATO and has expressed its will to create European Union Battlegroups as part of the EU's defence policy). Five countries (Sweden, Ireland, Malta, Cyprus and Austria) are EU members but not NATO members; furthermore, 9 EU countries joined NATO after 1999. These countries participate in the defence and foreign policy of the EU, and on top of that they are closely linked to other EU countries in terms of culture, politics, economy and potential threats. In this study, the effect of NATO membership is intercepted by a dummy variable.

The literature concerning military expenditures usually applies SIPRI (Stockholm International Peace Research Institute) data on cash basis or OECD/EU data collected on accrual basis. OECD/EU data is collected using the SNA08 methodology or its European counterpart ESA2010, and includes a bit more limited definition of military expenditures (it does not take into account expenditures on soldiers' pensions, social benefits or some expenditures on military hospitals and military universities). There are no significant differences between the cash and the accrual methods in the case of current expenditures (e.g. compensation or operation and maintenance); the differences, however, are large in the case of arms purchases. According to the cash method, arms purchases are registered upon payment; whereas in the accrual method, arms purchases are registered upon the delivery or commissioning of arms (artillery units, tanks, ships, etc.).

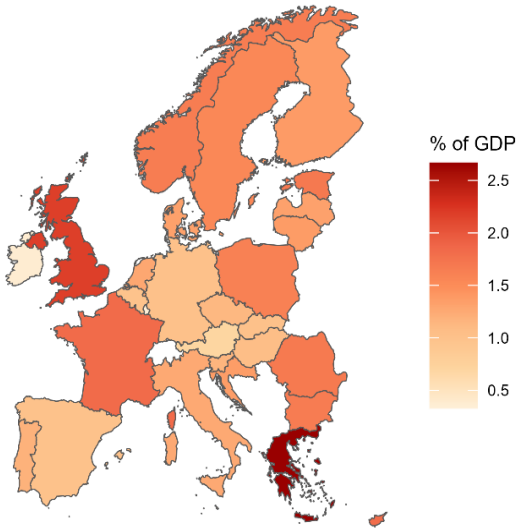
From the point of view of political economy, voters value the economic effect of expenditures (in this case, an increase of defence capabilities) much more than the cash flow; therefore, this study uses ESA2010 data from Eurostat on the expenditures of general governments divided in COFOG (Classification of Functions of Government) categories[1]. The DF02 "Defence" category

[1] Moreover, in the case of 5 out of 29 countries (Croatia, Cyprus, Finland, Luxembourg, Slovakia) SIPRI data do not include expenditures on pensions for retired soldiers. These expenditures in other EU countries amount to 0.1-0.4% of GDP, making application of ESA2010 data more methodologically correct.

represents military expenditures. In this category, data on the compensation of employees is classified as military personnel expenditures; data on gross fixed capital formation as military equipment purchases; and other categories as other military expenditures. All values are logs of selected military expenditures in relation to the GDP. Data on average military expenditures in each of the categories is presented in Maps 1-4.

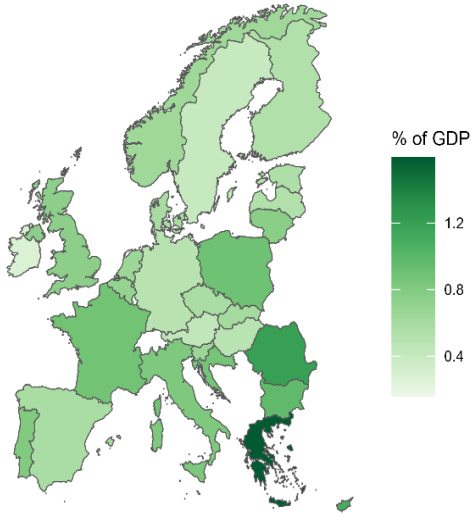
Maps 1-4.

Average total military expenditures 1999-2022



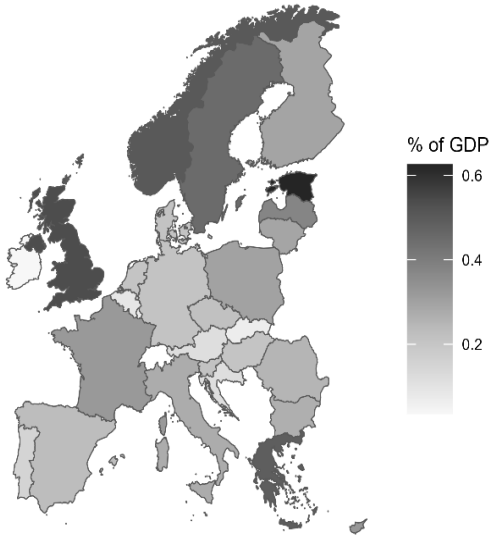
Source: Eurostat (ESA2010)

Average military expenditures on personnel 1999-2022



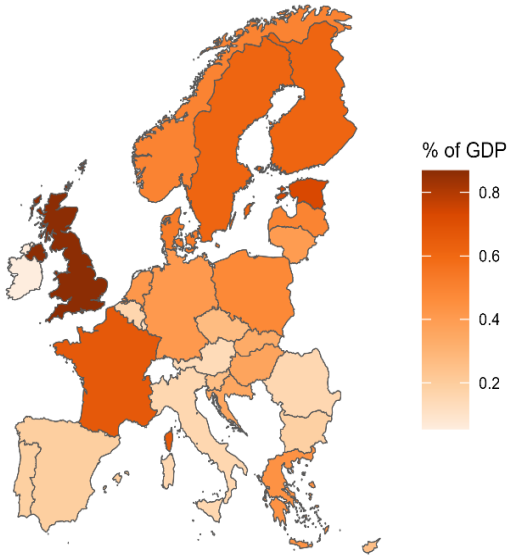
Source: Eurostat (ESA2010)

Average military expenditures on equipment purchases 1999-2022



Source: Eurostat (ESA2010)

Average other military expenditures 2014-2022



Source: Eurostat (ESA2010)

The literature review presented in Section 2 indicates that the military expenditures of a given country are a function of external and internal threats, military expenditures of allies, economic situation, and institutional and political factors. The control variables that reflect the economic situation of a given country are the first differences of GDP logs and populations logs. Since the

dependent variable are logs of military expenditures in relation to the GDP, it is necessary to take into account shifts in the GDP, as the change of the denominator has a crucial effect on this ratio. The non-rivalness characteristic of security as a public good and an increase in population may not lead to an increase in military expenditures. There may, nevertheless, be an increase in demand for a pure public good (like public security) if it has high income elasticity of demand and if rising population reduces the tax cost faced by the median voter. To capture possible fiscal adjustments and crowding-out of other government expenditures, other government expenditures in relation to GDP are added (i.e. total government expenditures minus military expenditures).

In order to properly intercept a variance in military expenditures of EU/NATO countries resulting from external threats, the model applies four control variables describing the potential effect of allies and rivals on the military expenditures of the country being studied. One of them is the ratio of US soldiers stationed in a given year in the territory of a given country to the population of a given country, which allows to measure whether the higher presence of US soldiers is complimentary or substitutional to European countries military effort. This study uses the number of US soldiers deployed in NATO countries instead of US military expenditures due to the fact that US military expenditures are determined by foreign missions and other geopolitical factors (e.g. rivalry with China), which are not necessarily linked to Europe's security (see Allen et al. 2016; Kuokštytė et al. 2020).

In addition, three variables x_{it} were created as the weighted averages of military expenditures of *N* countries neighbouring with country i in year t):

$$x_{it} = \sum_{n=1}^{N} \delta * w_{in} * Milex_{nt} \quad (1)$$

where weights w_{in} is the share of land borders of country i with country n in relation to the entire length of land borders of country i. In the case of the first variable (NATO neighbours), parameter δ takes value 1 if both countries i and n were NATO-members in year t and 0 otherwise. In the case of the second variable (non-NATO neighbours), parameter δ takes value 1 if at least one of the countries i or n were not a NATO member and were neither Russia nor Belarus in year t. In the last case (Russia and Belarus neighbours), parameter δ takes value 1 if country n is Russia or Belarus.

The first variable x_{it} (NATO members) allows intercepting a potential free-riding or follower effect among the allies, as well as the effects of NATO expansions in 2004, 2009, 2017 and 2020. Value 0 of this variable means that a given country has not been a neighbour to any ally. The second variable (non-NATO neighbours) allows intercepting the effect of changes in military expenditures of neighbours not being NATO members (Sweden, Finland, Switzerland, Austria, Ireland, Serbia or Bosnia and Herzegovina), as well as the effect of 8 EU countries joining NATO in 2004 and 2009. Value 0 means that a given country only neighboured allies. The third variable allows intercepting the effect of an increase of military expenditures of Russia and Belarus, i.e. of countries constituting a potential threat to NATO countries, on the military expenditures of 5 countries in the studied sample: Norway, Poland, Lithuania, Latvia, and Estonia. Value 0 means that a given country does not neighbour Russia. Creating a separate variable reflecting the fact of neighbouring Russia is based on an assumption that having a border with Russia or Belarus is a bigger threat to NATO countries than, e.g., having a border with the ever-neutral Switzerland, Austria, or Sweden. Descriptive statistics are presented in Table 1.

Table 1. Descriptive statistics (29 countries in 1999-2021)

Variable	Source	Min	Median	Mean	Max	Std. dev.
Military expenditures to GDP	Eurostat	0,21	1,27	1,32	3,65	0,56
Military personnel expenditures to GDP	Eurostat	0,13	0,63	0,69	1,94	0,31
Military equipment expenditures to GDP	Eurostat	0,00	0,22	0,26	1,34	0,21
Military other expenditures to GDP	Eurostat	0,03	0,34	0,37	1,30	0,22
Logarithm of GDP (in thousands)	Eurostat	15,60	19,63	19,60	24,51	2,05
Logarithm of population (in thousands)	Eurostat	-0,95	2,12	2,03	4,42	1,39
Other general government expenditures to GDP	Eurostat	21,3	43,6	43,7	64,5	6,55
NATO membership (dummy variable)	NATO	0,00	1,00	0,73	1,00	0,45
NATO neighbours' military expenditures*	Eurostat	0,00	0,62	0,59	1,93	0,51
Non-NATO neighbours' military expenditures*	Eurostat/SIPRI	0,00	0,58	0,82	3,46	0,84
Russia and Belarus military expenditures*	SIPRI	0,00	0,00	0,19	3,48	0,47
Death casualties of terrorist attacks**	Global Terrorism Database	0,00	0,00	0,37	15,65	1,46
Ratio of US soldiers to population (per cent)	US Department of Defence	0,00	0,0003	0,005	0,10	4,23
Refugees to population ratio (per cent)	UNHCR	0,00	0,34	1,14	19,86	2,62
Left-wing government (dummy)	DPI	0,00	0,00	0,33	1,00	0,47
Centrist government (dummy)	DPI	0,00	0,00	0,22	1,00	0,42
Government position on military affairs	Comparative Manifesto Project	-6,15	1,16	1,45	12,92	1,78
Parliamentary election (dummy)	Country data	0,00	0,00	0,26	1,00	0,44
Results of ruling coalition in municipalities with military bases (relation to general results)	Country data	0,51	1,01	1,02	1,60	0,15
Armed forces personnel	US Department of State	0,8	24,2	62,3	420,0	81,8

* Weighted average of military expenditures to GDP ratio, land border shares as weights

** 5-year average, per 1 mn population

Two subsequent variables describe other potential threats, such as terrorist attacks in the territory of a given country (e.g. George & Sandler 2018; Kuokštytė et al. 2020) or influx of refugees causing voters to pressure politicians to increase military expenditures. The influx of refugees from across the Mediterranean Sea also entails a need to patrol and rescue refugees by the navy of NATO countries. The first variable is the number of death casualties of terrorist attacks (according to the Global Terrorism Database) over the last five years in relation to the population of a given country. The other variable is the ratio of the number of refugees in the territory of a given country (based on data from the UN Refugees Agency, UNHCR) to that country's population expressed as a percentage.

The aim of the article is to study the influence of political and institutional factors on military expenditures of 29 EU-NATO countries. Variables describing the government ideology were built based on data from the Database of Political Institutions (DPI). "Left-wing government" and "Centrist government" dummy variables were created, with right-wing government serving as a reference point to avoid collinearity.

Next studied variable is dummy variables taking value 1 in a parliamentary election year and 0 otherwise. Adding this variable allows measuring whether governments significantly increase or decrease military expenditures in parliamentary election years. Moreover, the interaction variables have been created as election year dummies multiplied by government ideology dummies. Adding these variables to a selected equation allows measuring whether left-wing, centrist and right-wing governments fighting for re-election make different budgetary decisions in terms of determining the level of military expenditures in the election year.

The last studied variable constitutes the ratio of average support for the ruling coalition in municipalities or constituencies with military bases (land army, air force, and naval bases) to nation-wide support for the ruling coalition. Creating such variable constitutes a proxy of support among those linked to the military. Public safety and national defence are not purely public goods, because these expenditures are transferred to specific interest groups. If soldiers serve as the core voters of a coalition ruling in a given country, then politicians, after winning the election, can reward their voters through pay rises and public procurement. The significance of this variable would indicate the existence of political allocation of resources and transfer of public funds to the "core voters" in accordance with the model of Cox and McCubbins (1986).

For each of the 29 studied countries, publicly available data on the location of military units in the country was collected, followed by collecting data on support for the ruling coalition with the use of publicly available data on the results of subsequent parliamentary election from state bodies responsible for maintaining it. For instance, if in year t the coalition ruling country i obtained 50% of votes nation-wide and on average 60% of votes in municipalities with military bases, then in years $t + 1$ and in subsequent years the variable takes value 1.2. Since elections are held in different months of the year, the coalition being in power on 1 January was assumed as the determinant, because in most European countries the budget is adopted at the turn of years.

The target level was a municipality or constituency with a military base; in the case of large cities, the aim was to collect data from the closest precinct. The study included only those military bases with a number of infantry units equal at least to a battalion, brigade or regiment; armoured units, mechanised units and artillery units the size of at least a company; as well as larger military airfields or naval bases. The study omits military bases which host only smaller logistical units and chemical defence units, or paramilitary units, or which host only radar stations. Overall, for the 29 countries, data from a total of 510 military bases was collected. Their detailed list broken down into countries is contained in Appendix 1. As the map in Appendix 2 shows, military bases are located in multiple regions in every country. Moreover, they are located both in capitals and bigger cities as well as in smaller cities and in the country, which makes this sample more representative and minimises any potential bias resulting from non-random location of military bases.

4. Empirical strategy

This research is based on a concept deriving from previous models of demand for military expenditures. The created model is similar to formal models developed from the neo-classical approach, which considers the state as maximising social welfare with security included in the social welfare function (e.g. Smith 1989; Dunne & Perlo-Freeman 2003; Dunne et al. 2008). For allied countries, this approach is broadened to include conclusions drawn from joint product models of alliances (e.g. Sandler & Murdoch 1984, George & Sandler 2022). According to this approach, demand for military expenditures in country i (M_i) can be presented as a function of economic factors (Y), factors of external (T_{EXT}) and internal (T_{INT}) threats, military expenditures of allies (M_{-i}) as well as institutional and political factors (P):

$$M_i = M(Y, T_{EXT}, T_{INT}, M_{-i}, P) \quad (2)$$

The aim of this study is to verify hypotheses on the effect of government ideology, the existence of a political budgetary cycle in parliamentary and presidential elections, and the effect of support among people connected with the military on military expenditures. For this end, a number of control variables capturing the effect of external and internal threats was used, together with economic and country-specific factors. The description of the control variables is presented in Section 3.

Military expenditures are subject to world-wide trends, which have a similar effect on all studied countries, which requires introducing time-specific variables. In addition, each European country comes with its own specificity (e.g. military expenditures in Greece are determined by the conflict with Turkey), which requires taking country-specific effects into consideration. Military expenditures tend to have a large inertia (e.g. Capella Zielinski et al. 2017), which necessitates introducing a lagged dependent variable. Military expenditures of EU-NATO countries are likely to be cross-sectional dependent. Applying the typical Ordinary Least Squares method to estimating dynamic panel models is not appropriate due to potential non-spherical errors resulting from both contemporaneous correlation across units and unit level heteroskedasticity making inference from standard errors produced by Ordinary Least Squares incorrect (Beck and Katz 1995). Moreover, the results of Wooldridge (2011) test for first order serial correlation in panel-data models allow concluding that a correction for serial correlation should be included when choosing the estimation technique.

Thus, the main method is the Panel-Corrected Standard Error (PCSE) estimation (Beck and Katz 1995). In this method, standard errors are heteroskedasticity-consistent (HC) and corrected for contemporaneous correlation across panels. A lagged dependent variable was included as one of possible solutions to solve the serial correlation problem (Kittel & Winner 2005). To produce unbiased results, the Generalised Least Squares (GLS) method using the Preis-Winsten procedure with panel-specific AR(1) autocorrelation structure was applied (Bailey & Katz 2011). Similar econometric techniques to study military expenditures were applied by Bove et al. (2017) and Hauenstein et al. 2021, among others. The results of model estimation using the PCSE method are presented in Table 2.

The alternative method of dealing with unit level heteroskedasticity and cross-sectional dependence is to apply spatial methods. The military expenditures of EU and NATO countries are correlated with each other. These countries face similar threats (Russian imperialism, terrorism), their level of security is to a certain degree determined by the military expenditures of the USA, and their business cycles are synchronised. In addition, spill-overs resulting from free-riding or follower effects in the alliances may influence military expenditures of other allied countries. All of this justifies applying the spatial method as an alternative to PCSE estimation including a NATO neighbours' military expenditures variable calculated using Equation (1). Moreover, the results of the Baltagi-Song-Jung-Koh (2003) test indicate that spatial error correlation is present in the analysed data. This implies that applying alternative estimation methods focusing on spatial spill-overs and comparing them with PCSE estimation results may confirm the robustness of the results.

Spatial econometric models differ from each other in that they apply different combinations of spatial lags and flexibility of country spill-over effects. Based on tests of significance of spatial error parameters ρ, spatial autoregressive coefficients λ and exogenous spatial lags θ, the Spatial autoregressive combined model (SAC, also known as SARAR model) with two-way specification

using maximum likelihood estimation was selected. The parameters of the following equation were estimated:

$$Y_{it} = \tau Y_{i,t-1} + \rho W Y_{it} + X_{it}\beta + \mu_i + \xi_t + u_t \quad (3)$$

where

$$u_{it} = \lambda W u_{it} + \epsilon_{it} \quad (4)$$

Y_{it} is a vector of the dependent variable (military expenditures to GDP), X_{it} is a matrix of explanatory variables, W is a non-negative spatial weights matrix whose diagonal elements are 0; $\rho W Y_{it}$ represents the endogenous spatial lag, while $\lambda W u_{it}$ represents the spatial lag among the error terms. Furthermore, μ_i is a vector of country fixed effects, ξ_t measures time fixed effects and ϵ_{it} is a vector of error terms. In this spatial model, the idiosyncratic errors are spatially autocorrelated, while the individual effects are not (Baltagi et al. 2003).

First, including endogenous spatial lags in the model allows taking into account effects resulting from the influence of military expenditures of all other studied countries on the military expenditures of a given country, and, consequently, on any potential spill-overs between the European NATO countries. Second, a spatial lag among the error terms might be pertinent if countries share similar unobserved characteristics or face similar unobserved institutional environments (Yesiliurt & Elhorst 2017). Since the studied countries are similar institutionally, economically and politically, taking into account the spatial lag among the error terms is justified. Tests of significance of exogenous spatial lags (parameter θ in possible $\theta W X_{it}$ extension) suggested that in this sample they are close to zero and insignificant, and thus the chosen model does not include exogenous spatial lags. For the SAC (SARAR) models, a proportionality relationship arises between the direct and spill-over effects, so the spill-over effects take constant values across all variables (Elhorst 2010).

The literature includes various specifications of spatial weight matrix W. Goldsmith (2007) applies a binary contiguity matrix based on land and maritime borders, and an inverse distance matrix. Skogstad (2015) creates three additional specifications, based on the potential to project their military power worldwide; Flores (2011) uses geographical distances between capitals and spatial weight matrices based on alliance membership. The main reason for applying spatial methods in this research is to capture the relationships among EU-NATO countries. Applying a contiguity matrix may be wrong, because, according to the joint product model, the sum of expenditures of every country in the alliance affects the military expenditures of a given country. Thus, the row-normalised spatial weight matrix with inverse distances between capitals was included in the model. The results of the SAC (SARAR) estimation are presented in Table 3.

<Table 2 here>

5. Results

The results presented in Table 2 and Table 3 indicate that both of the applied methods produce similar estimation results – both the PCSE method with a control variable describing the military expenditures of neighbours from NATO, and the alternative SAC (SARAR) method, which includes spill-over effects and error terms corrected for potential spatial error correlation. This article focuses on political factors, and these two methods produce very similar results in terms of statistical significance and the value of parameters for independent variables. The significance of

these independent variables in spite of using two different methods of calculating error terms demonstrates that the results are robust against a change in the estimation method and thus more credible.

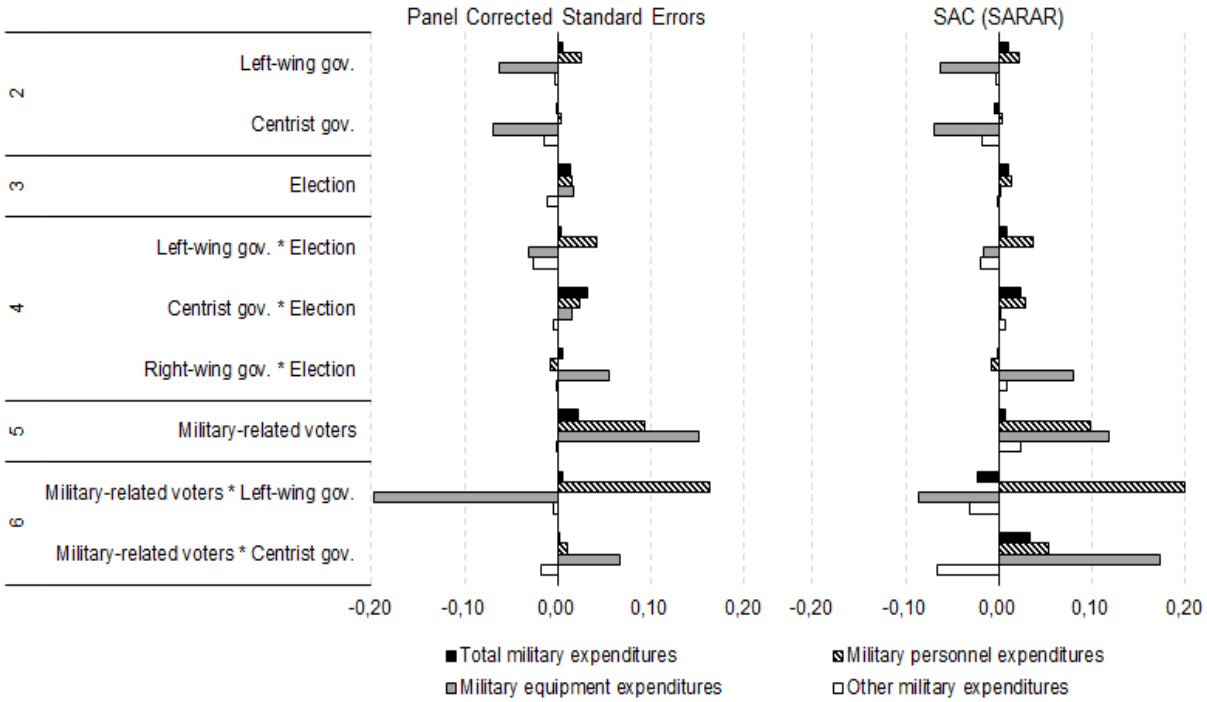
Both Table 2 and Table 3 present results for four dependent variables (total military expenditures, personnel expenditures, equipment expenditures and other military expenditures). For each dependent variable, six specifications were applied. The first includes only external threats, the second two government ideology variables (left-wing government and centrist government), the third dummy variable for parliamentary election year, and the fourth specification with interaction variables studies potential different decisions in election years made by left-wing, centrist and right-wing governments. The fifth specification includes a variable with support for the government in municipalities or constituencies with military bases, and the sixth includes interaction variables with the same support multiplied by government ideology. Marginal effects of variables of interest in above-mentioned specifications are presented in Figure 1.

<Table 3 here>

In all model specifications, the lagged dependent variable is statistically significant and close to one, which indicates a large inertia and lack of drastic changes in military expenditures of the studied 29 EU-NATO countries. The first differences of GDP logs and country population logs are not always significant. GDP growth has the desired sign, as GDP growth causes a decrease of the military expenditures-to-GDP ratio. In turn, an increase of population is insignificant in almost every equation, and the most probable explanation is lack of drastic changes in the populations of European countries. Other government expenditures are significant only for military personnel expenditures. The negative signs of the estimated parameters suggest the existence of the crowding-out effect – paying more to soldiers is linked to other government expenditures cuts as there is a trade-off between military personnel expenditures and other government expenditures.

In the case of the PCSE method, the variable containing the weighted average of NATO-member neighbours is statistically insignificant. Therefore, it does not indicate that the expenditures of the closest allies have any significant effect on the amount of military expenditures of the studied countries. Meanwhile, in the case of the SAC spatial method, spatial autoregressive coefficients λ are statistically significant and relatively low in every military expenditures category except military equipment purchases, which suggests that relatively low spill-overs may affect the military expenditures of EU-NATO countries across direct country borders. In the case of both methods, an increase of expenditures of neighbours outside the alliance causes an increase of military expenditures of a NATO country. This suggests that bordering an ally causes lower military expenditures due to the potential threat being lower. However, the structure of the variable and the lack of its significance in the case of selected disaggregated expenditures categories do not allow concluding clearly the existence of free-riding among the European EU-NATO countries. Also insignificant in almost all specifications is the variable describing the US soldiers-to-population ratio, which also does not allow concluding the existence of the free-riding effect or the follower effect.

Figure 1. Marginal effects of selected variables (percentage points of GDP)



Note: Growth in variable describing support for ruling coalition in municipalities or constituencies with military bases by one represents theoretical situation when this support is two times higher than nation-wide support for ruling coalition.

In some specifications, especially for other military expenditures, significant is the variable describing the product of Russian military expenditures as a percentage of the GDP and percentage of borders shared with Russia and Belarus. This variable takes a value greater than zero for Poland, Lithuania, Latvia, and Estonia. This demonstrates that the Russian threat has a significant effect on the level of military expenditures in the group of these four countries. In accordance with the Latin phrase *si vis pacem para bellum* (if you want peace, prepare for war), an increase of Russian military expenditures causes the countries belonging to NATO's Eastern Flank to prepare accordingly. The above-average increase of military expenditures in these countries after 2014 allows concluding that, in spite of being NATO members, these countries spend more on their military due to impurely public protective benefits that come from their own military expenditures. In case of NATO's war with Russia, these countries would be hurt much more than the countries of western Europe, and the Russian army could occupy the territories of these countries first. This hypothesis is corroborated by the above-average increase of military expenditures in these countries in the 1999-2021 period. The obtained results constitute a confirmation of results from other works (George & Sandler 2018; Becker 2019; Kuokštytė et al. 2020; Kim & Sandler 2023), which indicate that the Russian threat causes an increase of military expenditures.

The variable representing the number of fatalities caused by terrorism is significant in the case of disaggregated military expenditures in the PCSE method and insignificant in the SAC (SARAR) method. These results suggest that countries struggling with terrorist attacks may increase their military expenditures; but after controlling for spatial autocorrelation, this effect becomes insignificant. The influx of refugees to EU-NATO countries causes a significant increase of total military expenditures (for both methods) and other military expenditures (in the case of the SAC

method). It is consistent with intuition, as activities aimed at protecting borders, patrolling coastal waters and rescuing migrants require expenditures on training, fuel and operations and maintenance (O&M).

The first of the hypotheses verified in this article is the hypothesis of the influence of government ideology on the level of military expenditures. The literature presented in Section 2 suggests that right-wing governments spend more on the military (Kuokštytė et al. (2020); Bove et al. (2017); Whitten & Williams (2010); Karagol & Turhan (2008)). However, the results of estimations conducted using the two methods indicate that, on the sample of the 29 EU-NATO countries in the years 1999-2021, it is much more nuanced. Dummy variables describing government ideology are insignificant in the equation with total military expenditures as a dependent variable.

Disaggregation allows understanding why this variable is insignificant. In the case of military personnel expenditures, the variable describing left-wing governments is statistically significant and with a positive sign, which allows concluding that left-wing governments tend to spend significantly more on the compensation of soldiers and civilian employees in the military. In turn, in the case of arms purchase expenditures, the variables describing left-wing and centrist governments are statistically significant and with negative signs. Thus, right-wing governments tend to spend more on arms purchases than left-wing and centrist governments. Therefore, if a left-wing government spends more on the compensation of soldiers and less on arms purchases, and a right-wing government does the opposite, than an overlap of these two effects may cause a lack of statistically significant effect of government ideology on total military expenditures as the estimated parameters are very close to 0. Although the point estimates of the parameters next to left-wing dummy variables in military personnel and equipment equations are not equal (0.02-0.03 vs. -0.06-0.07), different decisions of right-wing and left-wing governments are clearly visible and significant. The overall influence of government ideology on military expenditures may not be zero, but is low enough to be insignificant.

These findings are in line with the theories of Whitten and Williams (2010) as well as Kauder and Potrafke (2015). Right-wing governments lead more hawkish (interventionist) foreign policies, and having better equipped armies helps them in this regard; whereas left-wing governments lead more dovish (isolationist) foreign policies, which allows lower expenditures on arms purchases. Right-wing governments lead a more conservative fiscal policy and are more inclined to support the austerity policy, and thus they are less willing to increase soldiers' compensation. Left-wing governments are more inclined towards an expansionary fiscal policy and pay a lot of attention to the salaries of the employees in the public sector, and thus they are more willing to increase the salaries of soldiers and civilians working in the military. The obtained results suggest that the guns vs. butter dilemma may be present also in military expenditures, which are typically considered "guns" expenditures. The estimation results show that left-wing governments provide more butter (personnel expenditures), whereas right-wing governments buy more guns (military equipment and arms purchases).

Similarly nuanced are the results of variables describing the existence of a political budgetary cycle in military expenditures. Previous works have studied the significance of the variable describing the year of parliamentary election and indicated a drop in military expenditures in the election year (Kuokštytė et al. (2020); Bove et al. (2017)), or have produced ambiguous results (Klomp 2023). The results of this study indicate that the variable describing the year of

parliamentary election is significant only in the case of personnel expenditures, suggesting that governments spend more on soldiers' compensation in the election year regardless of their ideology. The above-mentioned significance and negative sign of other government expenditures indicate that the growth of military personnel expenditures crowds-out other government expenditures.

Including interaction variables into equations gives an answer why a simple dummy variable for election years may be insignificant, and allows verifying the second hypothesis that government ideology affects the composition of military expenditures in the election year. The products of the parliamentary elections dummy variable and government ideology dummies show that right-wing, centrist and left-wing governments make different decisions in election years. Left-wing governments significantly increase military personnel expenditures in election years, while right-wing governments increase arms purchases. The values of parameters are significant and almost equal for the PCSE method (0.04 vs. 0.05) and different for the SAC (SARAR) method (0.04 vs. 0.08). The values of parameters for centrist governments lie between left-wing and right-wing governments, and are significant only in the case of personnel expenditures in the SAC (SARAR) method. These results confirm the aforementioned conclusions that left-wing governments focus mainly on the salaries of employees in the public sector, while right-wing governments on expanding defence capabilities and offensive potential, which are needed for a more hawkish foreign policy. During the election year, they may manipulate military expenditures and create a political budgetary cycle to present their competences in implementing policies in accordance with the declared ideology, and target specific groups of voters to gain their support (see Drazen and Eslava 2010). The values of the parameters and insignificance of the parameters by total military expenditures equations suggest that it is a compositional budgetary cycle resulting from partisan ideology.

The last studied variable is the effect of support for the government in municipalities or constituencies with military bases. The effect of government's decision on the socio-economic situation in such municipalities is strong. The army remains one of the main employers and, apart from the soldiers, it also employs many civilian workers. Local firms earn money through construction or maintenance works or food deliveries. Soldiers deployed in the barracks shop and use the services in the local municipality or constituency. The families of professional soldiers often move to the municipality at which the soldiers are deployed. Due to these reasons, government's decisions to increase or decrease military expenditures may have a very big impact on the socio-economic situation of a given municipality or constituency.

The variable describing the ratio of support for the ruling coalition in municipalities with military bases to nation-wide support for the ruling coalition constitutes a proxy of support for the government among voters linked to the military. If those linked to the military are the core voters of a given government, the government may increase military expenditures after elections in order to maintain support or to gain new voters (Cox & McCubbins 1986). Political parties which won the election and formed a government are interested mostly in maintaining support (high enough to win an election) and less on attracting new voters. Thus, keeping their promises after winning an election and transferring money to municipalities with above-average support is a rational strategy to maintain support among core voters. An increase of military expenditures motivated this way would not result only from the defence needs of a given country, but would serve as a political instrument to increase chances for re-election.

The estimation results indicate that this variable is statistically significant in the case of military personnel expenditures and equipment expenditures. The governments of the 29 EU-NATO countries spent more on the military when they had above-average support in municipalities or constituencies with military bases. It confirms the third hypothesis that military expenditures are not a purely public good and can be used as an instrument to gain or maintain support in elections through money transfers to core voters.

Including interaction variables that are the products of government ideology and average support for the ruling coalition in municipalities or constituencies with military bases shows similar patterns as in the case of the dummy variables describing government ideology and election years. Left-wing governments with high support among military-related voters increase mostly personnel expenditures, while right-wing governments focus on increasing equipment expenditures. Centrist governments significantly raise equipment expenditures.

In the tables in Appendix 3, robustness checks are presented. Government ideology in this article is described by dummy variables based on the Database of Political Institutions (DPI). As an alternative measurement of the effect of government ideology on military expenditures, the robustness checks apply the attitude of ruling parties towards military affairs, made available by the Comparative Manifesto Project. Military positive parties strive for increasing military expenditures and the number of soldiers, modernising military equipment and respecting alliance treaties, while military negative parties strive for disarmament, decreasing military expenditures and abolishing conscription. The variable was created based on the average value of these indices for all parties making up the government; it constitutes a subtraction of military positive score minus military negative score. The results show that military positive parties spend significantly more on equipment purchases and operations and maintenance, but not on personnel. These results corroborate the baseline results, because military positive parties are usually right-wing (Spearman correlation coefficient 0.404) and military negative parties are usually left-wing (0.360). Moreover, tables in Appendix 3 also present two different specifications of models from Tables 2 and 3. It is clearly visible that including ideology and parliamentary election variables together as well as including ideology and elections interaction variables together does not change the sign or significance of variables, and the values of the parameters are close to the values from the baseline models.

Left-wing governments increase personnel expenditures more than right-wing governments, but such a finding provides limited information about the reasons of these growths. It may be due to expanding the army and hiring new soldiers or civilian personnel, or due to wage increases. For that reason, the last two columns in the tables in Appendix 3 contain regressions with the log of the number of active military personnel as a dependent variable. The results of the first equation suggest that there is no election year effect in employment in the military, but the results from the second equation indicate that left wing-governments significantly reduce the number of military personnel. Taking into account the fact that left-wing governments spend more on military personnel, left-wing governments appear to focus on providing soldiers with wage raises, not on hiring more personnel.

6. Conclusions

The study of the determinants of military expenditures is difficult due to the number of the factors that may affect their value. Apart from external threats, it is also necessary to take into consideration the effect of military expenditures of the allies, internal threats, and economic factors. Institutional and political factors are also important, and the aim of this article is to demonstrate that they had a significant influence on the values of military expenditures of the 29 countries (EU-27 plus Norway and the UK) in the years 1999-2021.

This article shows that the influence of government ideology on military expenditures is more nuanced than would seem based on previous studies. The disaggregation of military expenditures into three categories (military personnel expenditures, arms purchase expenditures, other military expenditures) allows concluding that right-wing governments spend more on military equipment and armaments, while left-wing governments spend more on military personnel. This is in line with the theory of Whitten and Williams (2010), according to which left-wing governments lead a more expansionary fiscal policy (higher pay for soldiers) and a dovish foreign policy (lower expenditures on arms). Meanwhile, right-wing governments are more geared towards a restrictive fiscal policy (lower pay for soldiers) and a hawkish foreign policy (higher expenditures on arms). Only the disaggregation of military expenditures shows these dependencies, as the effect of government ideology on total military expenditures is statistically insignificant.

Government ideology also affects budgetary decisions in the election year. The results show that in the election year right-wing governments tend to spend more on arms and equipment purchases, while left-wing governments tend to spend more on military personnel. This differing decisions implies the existence of a compositional budgetary cycle in military expenditures resulting from differing partisan ideologies, because there is no evidence that governments increase or decrease total military expenditures in election years.

In the literature, it is usually assumed that military expenditures are a purely public good (non-excludable and non-rivalrous); yet it is often ignored that military expenditures are transferred to specific people (soldiers, civilian personnel in the military) and enterprises (arms industry and related sectors, suppliers of the army). For this reason, transfers to these specific groups of the electorate may be used to gain or maintain support during elections. Based on newly collected data from 510 municipalities or constituencies from 29 EU-NATO countries from the years 1999-2022, it has been demonstrated that governments enjoying above-average support in municipalities or constituencies with military bases spend significantly more on the military. It shows that military expenditures can also serve as an instrument to gain and maintain support for the government fighting for re-election. Political parties which obtained high enough support to form a government are interested mostly in maintaining support among core voters instead of seeking new supporters. Keeping electoral promises and transferring money to core voters may be an optimal strategy to maintain support and be re-elected.

The results presented in this article allow concluding that the "guns vs. butter" dilemma does not only apply to military expenditures and civilian expenditures. This dilemma may be applied to the composition of military expenditures, intuitively considered "guns". A decision-maker determining the composition of military expenditures must choose between higher wages of soldiers and buying new military equipment. Higher wages of soldiers lead to higher private consumption in the economy (butter), and buying new arms increases defence capabilities of the

army (guns). Left-wing governments tend to spend more on military personnel and right-wing governments tend to spend more on equipment purchases. In other words, left-wing gives soldiers more butter and right-wing gives them more guns. Assesing the influence of such decisions on defence capabilities of EU or NATO goes beyond this study, but military personnel and arms are complimentary and it may be interesting for further researchers to investigate the interaction between these two military expenditures categories.

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Appendix 1. Detailed list of municipalities or constituencies with military bases

Austria

Municipality level: Villach, St. Johann im Pongau, Wals-Siezenheim, Langenlebarn, Mautern an der Donau, Hörsching, Absam, Klagenfurt am Wörthersee, Mistelbach, Straß in Steiermark (Leibnitz), Zwölfaxing, Güssing, Melk, Großmittel, Ried im Innkreis, Wels, Allentsteig, Bludesch, Innsbruck, Lienz, Spittal an der Drau, Wals-Siezenheim, Saalfelden am Steinernen Meer, Feldbach, Sankt Michael in Obersteiermark, Amstetten

Belgium

Municipality level (arrondisements in parentheses): Grobbendonk (Herentals), Leopoldsburg (Beringen), Heverlee (Leuven), Marche-en-Famenne (Marche-en-Famenne), Spa (Verviers), Brasschaat (Antwerpen), Amay (Hoei), Zwijndrecht (Antwerpen), Flawinne (Philippeville), Tielen (Antwerpen), Beauvechain (Nijvel), Evere (Brussels), Florennes (Philippeville), Kleine Brogel (Maaseik), Bruges (Brugge)

Bulgaria

Constituency level: Stara Zagora, Kazanlak (Stara Zagora province), Blagoevgrad, Vratsa, Pleven, Belene (Pleven province), Smolyan, Varna, Plodviv, Haskovo, Karlovo (Plodviv province) Yambol, Asenovgrad (Plodviv province), Graf Ignatievo (Plodviv province), Krumovo (Plodviv province)

Croatia

Municipality level: Vinkovici, Đakovo, Našice, Osijek, Varaždin, Bjelovar, Petrinja, Karlovac, Slunj, Knin, Gospić, Benkovac, Zadar, Zagreb, Lora, Pleso

Croatia

Electoral precinct level: Paphos, Moniatis, Lakatamia, Mari – Larnaca, Limassol

Czechia

Constituency level (district in parentheses): Tábor (Tábor), Bechyně (Tábor), Žatec (Louny), Jince (Příbram), Strakonice (Strakonice), Chrudim (Chrudim), Opava (Opava), Hranice (Přerov), Jindřichův Hradec (Jindřichův Hradec), Liberec (Liberec), Brandýs nad Labem-Stará Boleslav (Praha-východ), Prague (East), Prostějov (Prostějov)

Denmark

Municipality level: Fredericia, Skive, Haderslev, Holstebro, Odense, Aalborg, Viborg, Ringsted, Copenhagen, Varde, Fredericia, Haderslev

Estonia

Constituency level: Paldiski, Amari, Tallinn, Tapa, Jõhvi, Taara, Võru

Finland

Electoral district level (1999-2007), municipality level (2008-2022): Sodankylä (Lapland), Rovaniemi (Lapland), Kajaani (Oulu), Säkylä (Satakunta), Niinisalo, Kankaanpää (Satakunta), Kankaanpää (Satakunta), Parolannummi, Hattula (Kanta-Häme/Tavastia), Riihimäki (Kanta-Häme/Tavastia), Santahamina polling station, (Helsinki, Uusimaa), Upinniemi, Kirkkonummi (Uusimaa), Lappeenranta, Hamina (South Karelia/Kymi), Dragsvik, Ekenäs/Raseborg (Uusimaa), Pansio presinct, Turku (Southwest Finland), Valkeala, Kouvola (Kymenlaakso/Kymi), Kuopio (Northern Savonia), Tikkakoski, Jyväskylä (Central Finland), Tampere (Pirkanmaa)

France

Constituency level (département and constituency name in parentheses): Clermont-Ferrand (Puy-de-Dôme, Clermont-Ferrand 1st), Sarrebourg (Sarrebourg-Château-Salins, Moselle 4th), Quartier La Horie (Phalsbourg, Moselle 4th), Bitche (Sarreguemines, Moselle 5th), Étain (Verdun, Meuse 2nd), Verdun (Verdun, Meuse 2nd), Pau (Pau, Pyrénées-Atlantiques 2nd), Bayonne (Bayonne, Pyrénées-Atlantiques 5th), Martignas-sur-Jalle (Bordeaux, Gironde 6th), Besançon (Doubs 1st), Belfort (Territoire de Belfort 1st), Bourogne (Belfort, Territoire de Belfort 1st), Mailly-le-Camp (Troyes, Aube 1st), Épinal (Vosges 1st), Colmar (Colmar, Haut-Rhin 1st), Valbonne (Grasse, Alpes-Maritimes 7th), Charleville-Mézières (Ardennes 2nd), Valdahon (Pontarlier, Doubs 5th), Poitiers, Poitiers, Vienne 2nd), Angoulême (Charente 1st), Champagné (Le Mans, Sarthe 2nd), Vannes (Vannes, Morbihan 1st), Brive-la-Gaillarde (Corrèze 2nd), Saint-Aubin-du-Cormier (Rennes, Ille-et-Vilaine 6th), Angers (Angers, Maine-et-Loire 7th), Fontevraud-l'Abbaye (Saumur, Maine-et-Loire 4th), Coëtquidan (Morbihan 4th), Varces-Allières-et-Risset (Grenoble, Isere 4th), Gap (Gap, Hautes-Alpes 1st), Cran-Gevrier (Annecy, Haute-Savoie 4th), Metz (Metz, Moselle 3rd), Castelsarrasin (Tarn-et-Garonne 2nd), Hyères (Toulon, Var 3rd), Fréjus (Var 5th), Illkirch-Graffenstaden (Strasbourg, Bas-Rhin 2nd), Olivet (Orleans, Loiret 1st), Mourmelon-le-Grand (Châlons-en-Champagne, Marne 4th), Suippes (Châlons-en-Champagne, Marne 4th), Laudun-l'Ardoise (Nîmes, Gard 3rd), Valence (Valence, Drôme 1st), Marseille (Marseille, Bouches-du-Rhône 5th), La Cavalerie (Millau, Aveyron 3rd), Balma (Toulouse, Haute-Garonne 3rd), Tarbes (Hautes-Pyrénées 2nd), Pamiers (Ariège 2nd), Calvi (Haute-Corse 2nd), Carcassonne (Aude 3rd), Castres (Tarn 1st), Montauban (Montauban, Tarn-et-Garonne 1st), Caylus (Montauban, Tarn-et-Garonne 1st)

Germany

Constituency level (party list): Rostock (Rostock – Landkreis Rostock II), Kiel (Kiel), Wilhelmshaven (Friesland – Wilhelmshaven – Wittmund), Ramstein (Kaiserslautern district), Wunstorf (Hannover-Land I), Nörvenich (Düren), Büchel (Mosel/Rhein-Hunsrück), Jagel (Flensburg – Schleswig), Neuburg (Ingolstadt), Husum (Nordfriesland - Dithmarschen-Nord), Münster (Münster), Oldenburg (Delmenhorst – Wesermarsch – Oldenburg-Land), Augustdorf (Lippe I), Neubrandenburg (Mecklenburgische Seenplatte I – Vorpommern-Greifswald II), Veitshöchheim (Wurzburg), Cham (Schwandorf), Frankenberg (Waldeck), Müllheim (Freiburg), Stadtallendorf (Marburg), Saarlouis (Saarlouis), Bad Reichenhall (Traunstein), Calw (Calw), Bückeburg (Nienburg II – Schaumburg), Prenzlau (Uckermark – Barnim I), Straelen (Kleve), Pirmasens (Homburg), Brück (Brandenburg an der Havel – Potsdam-Mittelmark I – Havelland III – Teltow-Fläming I)

Greece

Municipality level: Ioannina, Kozani, Veroia (Imathia region), Edessa (Pellas region), Serres, Kavala, Komotini (Rhodope region), Soufli (Evros region), Alexandroupolis (Evros region), Didymoteicho (Evros region), Mytilene (Lesbos region), Myrina, Lemnos (Lesbos region), Chios, Samos, Kos (Dodecanese region), Rhodes (Dodecanese region), Chania

Hungary

Constituency level: Újpest (4th district of Budapest), Szolnok, Debrecen (Debrecen 1st), Hódmezővásárhely, Tata, Szentes, Székesfehérvár, Kecskemét, Győr, Veszprém

Ireland

Constituency level: Dundalk (Louth), Rathmines (Dublin Bay South, until 2013 Dublin South-East), Cork (Cork North), Athlone (Longford-Westmeath, Longford–Roscommon in 1997 and 2002 election), The Curragh (Kildare South), Ballyshannon (Donegal, before 2016 Donegal South-West), Balbriggan (Meath East, Meath until 2007), Phoenix Park in Cabra (Dublin West), Ranmore (Galway West), Limerick (Limerick City, until 2011 Limerick East), Kilkenny (Carlow-Kilkenny)

Italy

Municipality level (provinces and regions in parentheses): L'Aquila (Abruzzo), Lecce (Apulia), Altamura (Bari, Apulia), Trani (Barletta-Andria-Trani, Apulia), Barletta (Barletta-Andria-Trani, Apulia), Lamezia Terme (Catanzaro, Calabria), Cosenza (Calabria), Caserta (Campania), Salerno (Campania), Capua (Caserta, Campania), Forli (Forli-Cesena, Emilia-Romagna), Bologna (Emilia-Romagna), Rimini (Emilia-Romagna), Opicina (Trieste, Friuli-Venezia Giulia), Udine (Friuli-Vanezia Giulia), Venzone (Gemona del Friuli, Friuli-Venezia Giulia), Remanzacco (Udine/Cividale del Friuli, Friuli-Venezia Giulia), Casarsa della Delizia (Pordenone, Friuli-Venezia Giulia), Pordenone (Friuli-Venezia Giulia), Cordenons (Pordenone, Friuli-Venezia Giulia), Civitavecchia (Lazio), Viterbo (Lazio), Bracciano (Rome, Lazio), Anzio (Rome, Lazio), Solbiate Olona (Varese, Lombardy), Milan (Lombardy), Orio al Serio (Bergamo, Lombardy), Bellinzago Novarese (Novara, Piedmont), Cuneo (Piedmont), Pinerolo (Turin, Piedmont), Teulada (Sardinia), Palermo (Sicily), Trapani (Sicily), Bolzano (Trentino-Alto Adige/Südtirol), Trento (Trentino, Trentino-Alto Adige/Südtirol), Florence (Tuscany), Darby Military Community (Livorno, Tuscany), Grosseto (Tuscany), Pistoia (Tuscany), Siena (Tuscany), Spoleto (Perugia, Umbria), Belluno (Veneto), Mestre (Venice, Veneto), Legnago (Verona, Veneto)

Latvia

Municipal/precinct level 2003-2022, electoral distict level 1999-2002: Ventspils, Liepaja, Suži (Riga Secondary School no. 63 precinct), Ādaži, Lielvārde, Ķegums, Mārupe, Rēzekne

Lithuania

Constituency level (proportional party votes): Klaipėda (Pajūrio), Tauragė, Šiauliai (Aušros), Radviliškis, Panevėžys (Aukštaitijos), Rukla, Kaunas (Petrašiūnų–Gričiupio), Alytus, Vilnius (Lazdynų)

Luxembourg

Electoral district level: Diekirsch, Herrenberg

Malta

Electoral districts level: Hay Wharf/Xatt it-Tiben (1st), Luqa Barracks (5th), Ħal Far (5th), Pembroke Army Garrison (10th)

Netherlands

Municipality level: Deelen (Ede), Schaarsbergen (Arnhem), Wezep (Oldebroek), Eibergen (Berkelland), Garderen (Barneveld), Apeldoorn, Ermelo, Arnhem, Assen, Oirschot, Hevelte (Westerweld), Enschede, Roosendaal, Vlissingen, Amersfoort, Vredepeel (Venray), t' Harde (Elburg)

Norway

Municipality level (municipality in parentheses): Bardufoss (Målselv), Setermoen (Bardu), Rena (Åmot), Skjold (Målselv), Setermoen (Troms og Finnmark), Porsangmoen (Porsanger), Høybuktmoen (Sør-Varanger), Terningmoen (Elverum), Innlandet

Poland

Municipality level: Żagań, Świętoszów, Osiecznica, Międzyrzecz, Wędrzyn, Sulęcin, Krosno Odrzańskie, Bolesławiec, Czerwieńsk, Zielona Góra, Sulechów, Leszno, Szczecin, Słupsk, Złocieniec, Drawsko, Lębork, Stargard, Choszczno, Koszalin, Olsztyn, Braniewo, Giżycko, Orzysz, Pisz, Morąg, Ostróda, Bartoszyce, Węgorzewo, Olecko, Gołdap, Elbląg, Siedlce, Wesoła-Warszawa, Lublin, Rzeszów, Przemyśl, Jarosław, Sitaniec, Zamość, Inowrocław, Pruszcz Gdański, Gdańsk, Kraków, Gliwice, Bielsko-Biała, Tomaszów Mazowiecki, Hrubieszów, Lidzbark Warmiński, Białystok, Brzeg, Brodnica, Bydgoszcz, Opole, Białobrzegi, Sieradz, Łask, Powidz, Malbork

Portugal

Municipality level: Beja, Tavira, Aveiro,Vila Real, Viseu, Tomar, Chavez, Queluz (Sintra), Leiria, Vendas Novas, Estremoz, Lisbon, Braga, Tancos (Vila Nova de Barquinha), Espinho, Porto

Romania

Municipality level: Craiova, Caracal, Bucharest (Sectorul 2)Târgoviște, Clinceni, Slobozia, Brasov, Predeal, Ghimbav, Câmpulung, Constanța, Curtea de Argeș, Topraisar, Medgidia, Murfatlar, Focșani, Galați, Brăila, Barlad, Iași, Bacău, Piatra-Neamț, Botoșani, Miercurea Ciuc, Vatra Dornei, Sfantu Gheorghe, Bistrița, Arad, Dej, Baia Mare, Șimleu Silvaniei, Timișoara, Câmpia Turzii

Slovakia

Municipality level: Martin, Trebišov, Michalovce, Trenčín, Prešov, Topoľčany, Malacky Levice, Nitra, Rožňava, Hlohovec

Slovenia

Constituency level (constituency name in parentheses): Ljubljana (Ljubljana Moste), Vrhnika, Bohinjska Bela (Radovljica 1st), Maribor (Maribor 7th), Celje (Celje 2nd), Murska Sobota (Murska Sobota 2nd), Slovenska Bistrica, Ankaran (Koper 2nd), Novo Mesto (Novo Mesto 1st), Postojna, Kranj (Kranj 1st)

Spain

Constituency level: Madrid, Valencia, Seville, Castrillo del Val (Burgos), Ceuta, Colmenar Viejo, Betera (Valencia), Dos Hermanas (Sevilla), Zaragoza, Melilla, S. Andrés d. Rabanedo (Leon), Paracuellos de Jarama, Pozuelo de Alarcón, Badajoz

Sweden

Municipality level: Arvidsjaur, Boden, Eksjö, Enköping, Falun, Halmstad, Karlsborg, Kristinehamn, Kungsängen, Upplands-Bro, Östersund, Skövde, Revingeby, Sollefteå, Visby

United Kingdom

Constituency level (constituency name in parentheses, in case of Northern Ireland votes for Democratic Unionist Party were assigned to Conservatives for the 2017-2019 period): South Cerney (The Cotswolds), Buckley Barracks (Chippenham), Marchwood Military Port (New Forest East), Holywood (North Down), Nottingham (Nottingham South), Plymouth (Plymouth Moor), Lyneham (North Wiltshire), Innsworth (Tewkesbury), Stafford, Bletchley (Milton Keynes South), Winchester, Bramcote (Nuneaton), Upavon Station in Wiltshire (Devizes), Warminster (South West Wiltshire), Fulford (York Central), Richmond, Aldershot, Windsor, Glencorse Barracks (Midlothian), Lisburn (Lagan Valley), Jubilee Barracks (St Helens South and Whiston), Kendrew Barracks (Rutland and Melton), Leuchars Station (North East Fife), Beachley (Forest of Dean), Topcliff (Thirsk and Malton), Surrey (Reigate), Bury St Edmunds, Maryhill (Glasgow North), Preston (Preston), Perth (Perth and North Perthshire), Exeter, Londesborough Barracks (Kingston upon Hull West and Hessle), Thorney Island (Chichester), Claro Barracks (Skipton and Ripon), Donnington (The Wrekin), Colchester (Colchester), Ternhill (North Shropshire)

Appendix 2. Map of military bases applied in this study

Appendix 3. Robustness checks

< Table 4 here>

<Table 5 here>

Table 2. Estimation results - Panel Corrected Standard Errors method

Dependent variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Total military expenditures						Military personnel expenditures					
Lagged dependent variable	0.968***	0.967***	0.968***	0.971***	0.967***	0.968***	0.972***	0.968***	0.972***	0.971***	0.953***	0.958***
	(0.0123)	(0.0122)	(0.0123)	(0.0120)	(0.0124)	(0.0122)	(0.0117)	(0.0128)	(0.0115)	(0.0119)	(0.0134)	(0.0127)
NATO membership	0.0194*	0.0197*	0.0186*	0.0176	0.0200*	0.0196*	0.0062	0.0057	0.0050	0.0042	0.0088	0.0040
	(0.0111)	(0.0110)	(0.0110)	(0.0110)	(0.0110)	(0.0111)	(0.0083)	(0.0087)	(0.0084)	(0.0081)	(0.0082)	(0.0088)
Log GDP (first difference)	-0.142	-0.142	-0.156	-0.200	-0.142	-0.143	-0.775***	-0.803***	-0.793***	-0.824***	-0.763***	-0.804***
	(0.257)	(0.260)	(0.256)	(0.256)	(0.256)	(0.260)	(0.206)	(0.207)	(0.205)	(0.203)	(0.205)	(0.205)
Log population (first difference)	-0.691	-0.722	-0.662	-0.637	-0.693	-0.725	-0.728	-0.996*	-0.712	-0.878	-0.596	-1.097*
	(0.645)	(0.658)	(0.640)	(0.649)	(0.646)	(0.658)	(0.562)	(0.570)	(0.566)	(0.550)	(0.574)	(0.567)
Log other government expenditures	-0.0028	-0.0048	-0.0055	-0.0022	-0.0038	-0.0047	-0.0787**	-0.0813**	-0.0840**	-0.0828**	-0.0878**	-0.0801**
	(0.0367)	(0.0371)	(0.0364)	(0.0357)	(0.0362)	(0.0372)	(0.0347)	(0.0356)	(0.0352)	(0.0354)	(0.0353)	(0.0359)
NATO neighbours' military expenditures	0.0576	0.0607	0.0586	0.0506	0.0585	0.0611	0.0929	0.0841	0.0982	0.0937	0.0841	0.0783
	(0.103)	(0.103)	(0.104)	(0.104)	(0.103)	(0.103)	(0.100)	(0.0984)	(0.0993)	(0.0983)	(0.102)	(0.0983)
Non-NATO neighbours' military expenditures	0.166**	0.173**	0.167**	0.156**	0.165**	0.173**	0.133**	0.140**	0.133**	0.131*	0.128*	0.142**
	(0.0783)	(0.0794)	(0.0783)	(0.0776)	(0.0780)	(0.0793)	(0.0674)	(0.0658)	(0.0672)	(0.0682)	(0.0658)	(0.0653)
Russia and Belarus military expenditures	0.433***	0.431***	0.428***	0.433***	0.435***	0.432***	0.106	0.0993	0.101	0.0995	0.113	0.102
	(0.128)	(0.128)	(0.127)	(0.126)	(0.128)	(0.128)	(0.104)	(0.102)	(0.103)	(0.0998)	(0.105)	(0.100)
Death casualties of terrorist attacks	0.0027	0.0025	0.0027	0.0029	0.0026	0.0025	0.0028**	0.0025*	0.0028**	0.0026**	0.0023	0.0022
	(0.0018)	(0.0018)	(0.0018)	(0.0018)	(0.0018)	(0.0018)	(0.0014)	(0.0015)	(0.0014)	(0.0012)	(0.0020)	(0.0017)
US soldiers to population	-0.0108	-0.0203	-0.0015	0.0440	-0.0306	-0.0200	-0.202	-0.276*	-0.208	-0.266*	-0.265*	-0.272
	(0.256)	(0.259)	(0.255)	(0.267)	(0.253)	(0.260)	(0.148)	(0.167)	(0.148)	(0.152)	(0.159)	(0.181)
Refugees to population ratio	1.140*	1.155*	1.159*	1.174*	1.146*	1.155*	0.137	0.158	0.165	0.242	0.104	0.170
	(0.644)	(0.644)	(0.639)	(0.631)	(0.641)	(0.644)	(0.481)	(0.480)	(0.488)	(0.484)	(0.487)	(0.474)
Left-wing government		0.0054						0.0250***				
		(0.0088)						(0.0087)				
Centrist government		-0.0004						0.0026				
		(0.0127)						(0.0115)				
Parliamentary election			0.0137						0.0147**			
			(0.0102)						(0.0072)			
Left-wing gov. * parliamentary election				0.0035						0.0417***		
				(0.0142)						(0.0122)		
Centrist gov. * parliamentary election				0.0308						0.0225		
				(0.0248)						(0.0177)		
Right-wing gov. * parliamentary election				0.0047						-0.0087		
				(0.0131)						(0.0090)		
Support among military-related voters					0.0209						0.0929***	
					(0.0245)						(0.0232)	
Support among military-related voters * Left-wing government						0.0053						0.1620***
						(0.0084)						(0.0696)
Support among military-related voters * Centrist government						0.0001						0.0098
						(0.0126)						(0.0116)
Constant	-0.0270	-0.0218	-0.0189	-0.0288	-0.0454	-0.0219	0.266*	0.266*	0.284**	0.282**	0.203	0.256*
	(0.144)	(0.145)	(0.143)	(0.141)	(0.150)	(0.145)	(0.136)	(0.138)	(0.138)	(0.139)	(0.137)	(0.139)
Wooldridge (2002) test statistics	38,544	38,656	38,532	38,288	38,285	39,018	112,470	115,329	112,721	119,265	114,006	114,958
Wooldridge (2002) test p-value	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
Observations	638	638	638	638	638	638	638	638	638	638	638	638
R-squared	0.961	0.961	0.961	0.962	0.961	0.961	0.966	0.967	0.966	0.967	0.968	0.967
Number of countries	29	29	29	29	29	29	29	29	29	29	29	29

Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Table 2. Estimation results - Panel Corrected Standard Errors method (continued)

Dependent variable	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)
	Military equipment expenditures						Other military expenditures					
Lagged dependent variable	0.741***	0.722***	0.741***	0.744***	0.735***	0.734***	0.967***	0.965***	0.967***	0.967***	0.967***	0.965***
	(0.0446)	(0.0432)	(0.0445)	(0.0438)	(0.0447)	(0.0445)	(0.0116)	(0.0119)	(0.0115)	(0.0117)	(0.0116)	(0.0119)
NATO membership	0.0527*	0.0738**	0.0516*	0.0561*	0.0554*	0.0611*	0.0318*	0.0339**	0.0322*	0.0328*	0.0318*	0.0341**
	(0.0309)	(0.0319)	(0.0308)	(0.0307)	(0.0313)	(0.0321)	(0.0170)	(0.0170)	(0.0170)	(0.0168)	(0.0171)	(0.0170)
Log GDP (first difference)	0.612	0.865	0.593	0.615	0.603	0.740	-0.433	-0.404	-0.429	-0.433	-0.433	-0.399
	(0.527)	(0.528)	(0.528)	(0.524)	(0.523)	(0.530)	(0.344)	(0.348)	(0.344)	(0.345)	(0.344)	(0.348)
Log population (first difference)	-1.444	-0.454	-1.407	-1.156	-1.317	-1.635	0.0434	0.0197	0.0374	0.0612	0.0377	0.0097
	(1.434)	(1.476)	(1.434)	(1.439)	(1.448)	(1.393)	(1.024)	(1.048)	(1.025)	(1.026)	(1.024)	(1.046)
Log other government expenditures	0.0696	0.0948	0.0664	0.0757	0.0604	0.0624	0.0198	0.0203	0.0201	0.0247	0.0202	0.0205
	(0.118)	(0.124)	(0.118)	(0.118)	(0.119)	(0.117)	(0.0541)	(0.0541)	(0.0538)	(0.0540)	(0.0541)	(0.0541)
NATO neighbours' military expenditures	0.150	0.157	0.154	0.169	0.152	0.144	0.0743	0.0745	0.0725	0.0754	0.0742	0.0744
	(0.218)	(0.214)	(0.219)	(0.217)	(0.216)	(0.220)	(0.184)	(0.184)	(0.184)	(0.184)	(0.184)	(0.184)
Non-NATO neighbours' military expenditures	0.229	0.182	0.231	0.246	0.229	0.198	0.189	0.180	0.189	0.190	0.190	0.178
	(0.208)	(0.197)	(0.208)	(0.205)	(0.207)	(0.205)	(0.120)	(0.121)	(0.120)	(0.121)	(0.120)	(0.121)
Russia and Belarus military expenditures	0.265*	0.245	0.257*	0.258*	0.280**	0.250*	0.306*	0.297*	0.309*	0.308*	0.306*	0.293*
	(0.139)	(0.150)	(0.140)	(0.142)	(0.137)	(0.143)	(0.162)	(0.164)	(0.163)	(0.161)	(0.162)	(0.164)
Death casualties of terrorist attacks	0.0107*	0.0113**	0.0106*	0.0107*	0.0102*	0.0107**	0.0036*	0.0037*	0.0036*	0.0038*	0.0037*	0.0037*
	(0.0056)	(0.0053)	(0.0056)	(0.0055)	(0.0056)	(0.0054)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)	(0.0022)
US soldiers to population	0.499	0.303	0.510	0.519	0.350	0.333	-0.255	-0.317	-0.256	-0.255	-0.253	-0.325
	(0.374)	(0.352)	(0.373)	(0.367)	(0.362)	(0.351)	(0.526)	(0.529)	(0.525)	(0.523)	(0.527)	(0.526)
Refugees to population ratio	0.610	0.630	0.643	0.659	0.651	0.646	1.741	1.779	1.723	1.738	1.739	1.770
	(0.812)	(0.812)	(0.812)	(0.811)	(0.811)	(0.816)	(1.079)	(1.082)	(1.078)	(1.075)	(1.079)	(1.082)
Left-wing government		-0.0628***						-0.0038				
		(0.0251)						(0.0140)				
Centrist government		-0.0702***						-0.0154				
		(0.0324)						(0.0181)				
Parliamentary election			0.0174						-0.0109			
			(0.0202)						(0.0165)			
Left-wing gov. * parliamentary election				-0.0309						-0.0263		
				(0.0288)						(0.0247)		
Centrist gov. * parliamentary election				0.0150						-0.0056		
				(0.0484)						(0.0369)		
Right-wing gov. * parliamentary election				0.0545*						-0.0020		
				(0.0286)						(0.0212)		
Support among military-related voters					0.151**						-0.0023	
					(0.0728)						(0.0383)	
Support among military-related voters * Left-wing government						-0.1981**						-0.0054
						(0.0640)						(0.0134)
Support among military-related voters * Centrist government						0.0663*						-0.0189
						(0.0370)						(0.0188)
Constant	-0.571	-0.637	-0.561	-0.602	-0.697	-0.545	-0.0774	-0.0795	-0.0764	-0.0934	-0.0765	-0.0799
	(0.455)	(0.480)	(0.455)	(0.456)	(0.476)	(0.452)	(0.211)	(0.211)	(0.210)	(0.211)	(0.217)	(0.211)
Wooldridge (2002) test statistics	1,964	3,092	1,967	1,984	1,961	1,930	77,269	75,995	71,618	73,755	75,442	79,250
Wooldridge (2002) test p-value	0,172	0,090	0,172	0,170	0,172	0,176	0,000	0,000	0,000	0,000	0,000	0,000
Observations	638	638	638	638	638	638	638	638	638	638	638	638
R-squared	0.769	0.780	0.769	0.772	0.775	0.772	0.961	0.960	0.961	0.960	0.961	0.960
Number of countries	29	29	29	29	29	29	29	29	29	29	29	29

Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Table 3. Estimation results - Spatial autoregressive combined model

Dependent variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Total military expenditures							Military personnel expenditures				
Lagged dependent variable	0,9698***	0,9672***	0,9697***	0,9718***	0,9695***	0,9683***	0,9825***	0,9804***	0,9823***	0,9832***	0,9826***	0,98***
	(0,0103)	(0,0107)	(0,0103)	(0,0104)	(0,0104)	(0,0108)	(0,0086)	(0,0088)	(0,0085)	(0,0086)	(0,0086)	(0,009)
NATO membership	0,0200	0,0215*	0,0197	0,0182	0,0202*	0,0206*	0,0028	0,0027	0,0022	0,0007	0,0027	0,0037
	(0,0122)	(0,0123)	(0,0122)	(0,0122)	(0,0122)	(0,0122)	(0,0089)	(0,0089)	(0,0089)	(0,0089)	(0,0089)	(0,009)
Log GDP (first difference)	0,0537	0,0572	0,0444	0,0122	0,0528	0,0601	-0,588***	-0,6045***	-0,5974***	-0,6152	-0,5877***	-0,5824***
	(0,2013)	(0,202)	(0,2014)	(0,2017)	(0,2013)	(0,2015)	(0,1567)	(0,1564)	(0,1563)	(0,1558)	(0,1567)	(0,1567)
Log population (first difference)	-0,7820	-0,8491	-0,7716	-0,7425	-0,7785	-0,7811	-0,5577	-0,6598	-0,5542	-0,5778	-0,5600	-0,5633
	(0,5809)	(0,5831)	(0,5809)	(0,5808)	(0,5811)	(0,5823)	(0,4536)	(0,4554)	(0,452)	(0,451)	(0,4539)	(0,4553)
Log other government expenditures	0,0044	0,0048	0,0035	0,0015	0,0037	0,0083	-0,0601**	-0,0636**	-0,0612**	-0,0641**	-0,0597**	-0,0553*
	(0,0365)	(0,0365)	(0,0365)	(0,0364)	(0,0366)	(0,0371)	(0,0283)	(0,0282)	(0,0282)	(0,0281)	(0,0284)	(0,0288)
Log of non-NATO neighbours' military expenditures	0,1184*	0,1208*	0,1189*	0,1168*	0,118*	0,1165*	0,0498	0,0593	0,0505	0,0522	0,0499	0,0473
	(0,0686)	(0,0688)	(0,0686)	(0,0685)	(0,0687)	(0,0687)	(0,0532)	(0,0531)	-0,0530	(0,0527)	(0,0532)	(0,0532)
Log of Russia and Belarus military expenditures	0,4385	0,4336	0,4345	0,4384	0,4389	0,4401	0,1361*	0,136*	0,1305*	0,1306*	0,1358*	0,139*
	(0,0956)	(0,0959)	(0,0956)	(0,0955)	(0,0956)	(0,0957)	(0,0737)	(0,0738)	(0,0736)	(0,0732)	(0,0738)	(0,0738)
Death casualties of terrorist attacks to pop.	0,0028	0,0027	0,0029	0,0028	0,0028	0,0030	0,0021	0,0017	0,0021	0,0019	0,0021	0,0023
	(0,0031)	(0,0031)	(0,0031)	(0,003)	(0,0031)	(0,0031)	(0,0024)	(0,0024)	(0,0024)	(0,0024)	(0,0024)	(0,0024)
US soldiers to population	-0,0067	-0,0570	-0,0052	0,0343	-0,0128	-0,0136	-0,2702	-0,3065	-0,2693	-0,2607	-0,2675	-0,2833
	(0,3779)	(0,3823)	(0,3774)	(0,3771)	(0,3788)	(0,3786)	(0,2975)	(0,2994)	(0,297)	(0,2954)	(0,2981)	(0,298)
Refugees to population ratio	1,0016**	1,024**	1,0135**	1,0443**	1,0058**	1,0111**	0,1356	0,1567	0,1541	0,1775	0,1332	0,1530
	(0,498)	(0,498)	(0,4981)	(0,4972)	(0,4983)	(0,4991)	(0,3851)	(0,3837)	(0,3839)	(0,3821)	(0,3855)	(0,3859)
Left-wing government		0,0105						0,0222***				
		(0,0105)						(0,0082)				
Centrist government		-0,0043						0,0040				
		(0,0124)						(0,0095)				
Parliamentary election			0,0105						0,0136*			
			(0,0103)						(0,008)			
Parliamentary election * Left-wing government				0,0086						0,0362***		
				(0,0164)						(0,0128)		
Parliamentary election * Centrist government				0,0226						0,0282*		
				(0,0207)						(0,0159)		
Parliamentary election * Right-wing government				-0,0022						-0,0089		
				(0,014)						(0,0109)		
Military bases					0,0075						0,0936***	
					(0,032)						(0,0249)	
Military bases * Left-wing						-0,0241						0,2620***
						(0,0541)						(0,0428)
Military bases * Centrist						0,0325						0,0516
						(0,0898)						(0,0703)
Spatial error parameter rho	-0,285**	-0,2829**	-0,2744*	-0,2669*	-0,2854**	-0,2865**	-0,4594***	-0,4407***	-0,4752***	-0,4544***	-0,4593***	-0,4607***
	(0,1404)	(0,1415)	(0,14)	(0,1398)	(0,1405)	(0,1405)	(0,1385)	(0,138)	(0,1389)	(0,1383)	(0,1385)	(0,1386)
Spatial autoregressive coefficient lambda	0,1616***	0,1740***	0,1618***	0,1512***	0,1623***	0,1625***	0,0272	0,0281	0,0269	0,0246	0,0271	0,0284
	(0,0561)	(0,0578)	(0,0562)	(0,0518)	(0,0562)	(0,056)	(0,0399)	(0,0399)	(0,0396)	(0,0397)	(0,0399)	(0,0398)
Baltagi-Song-Jung-Koh test statistics	34,9650	33,9765	35,5196	36,1905	34,9111	35,1111	5,0546	4,6291	4,6975	4,7495	5,0106	5,1374
Baltagi-Song-Jung-Koh test p-value	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0246	0,0314	0,0302	0,0293	0,0252	0,0234
Observations	638	638	638	638	638	638	638	638	638	638	638	638
Number of countries	29	29	29	29	29	29	29	29	29	29	29	29

Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Table 3. Estimation results - Spatial autoregressive combined model (continued)

Dependent variable	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)
	Military equipment expenditures							Other military expenditures				
Lagged dependent variable	0,7350***	0,7218***	0,7350***	0,7352***	0,7303***	0,7261***	0,9567***	0,9549***	0,9567***	0,957***	0,9564***	0,9573***
	(0,0266)	(0,027)	(0,0266)	(0,0268)	(0,0267)	(0,0271)	(0,0115)	(0,0117)	(0,0115)	(0,0115)	(0,0115)	(0,0117)
NATO membership	0,0399	0,0489*	0,0398	0,0407	0,0432	0,0454	0,033*	0,036*	0,033*	0,0335*	0,0337*	0,0319*
	(0,0284)	(0,0285)	(0,0284)	(0,0284)	(0,0284)	(0,0286)	(0,0191)	(0,0195)	(0,0191)	(0,0192)	(0,0192)	(0,0193)
Log GDP (first difference)	0,6235	0,7295	0,6217	0,6259	0,6089	0,6341	-0,604*	-0,5746*	-0,603*	-0,6081*	-0,6055*	-0,6074*
	(0,4881)	(0,4881)	(0,4885)	(0,4898)	(0,4872)	(0,4883)	(0,3196)	(0,3209)	(0,3198)	(0,3211)	(0,3194)	(0,3208)
Log population (first difference)	-1,9527	-1,9631	-1,9493	-1,9174	-1,8606	-1,6417	0,0258	0,0201	0,0250	0,0598	0,0438	-0,0412
	(1,329)	(1,3239)	(1,3293)	(1,3292)	(1,3279)	(1,3414)	(0,9021)	(0,9022)	(0,9021)	(0,9028)	(0,9027)	(0,9098)
Log other government expenditures	0,0270	0,0220	0,0269	0,0287	0,0144	0,0300	0,0195	0,0209	0,0196	0,0209	0,0175	0,0193
	(0,0859)	(0,0855)	(0,0859)	(0,0859)	(0,0861)	(0,087)	(0,0583)	(0,0583)	(0,0583)	(0,0583)	(0,0585)	(0,0596)
Log of non-NATO neighbours' military expenditures	0,2922*	0,2715	0,2924*	0,2909*	0,287*	0,2811*	0,1982*	0,1926*	0,1981*	0,1961*	0,197*	0,2003*
	(0,1681)	(0,1677)	(0,1681)	(0,168)	(0,1678)	(0,1679)	(0,1104)	(0,1107)	(0,1104)	(0,1105)	(0,1104)	(0,1106)
Log of Russia and Belarus military expenditures	0,2277	0,1791	0,2270	0,2278	0,2349	0,2517	0,3367**	0,3248**	0,3372**	0,3388**	0,3392**	0,3305**
	(0,2327)	(0,2326)	(0,2329)	(0,2328)	(0,2322)	(0,2327)	(0,1529)	(0,1533)	(0,153)	(0,153)	(0,1528)	(0,1533)
Death casualties of terrorist attacks to pop.	0,0113	0,0112	0,0113	0,0115	0,0112	0,0113	0,0021	0,0020	0,0021	0,0023	0,0020	0,0022
	(0,0075)	(0,0075)	(0,0075)	(0,0075)	(0,0075)	(0,0075)	(0,0049)	(0,005)	(0,0049)	(0,0049)	(0,0049)	(0,005)
US soldiers to population	0,6041	0,2862	0,6043	0,6139	0,5285	0,5397	-0,3073	-0,3966	-0,3075	-0,2880	-0,3260	-0,2869
	(0,9266)	(0,9298)	(0,9266)	(0,928)	(0,9268)	(0,9255)	(0,6138)	(0,6225)	(0,6138)	(0,6149)	(0,6152)	(0,6147)
Refugees to population ratio	0,7462	0,8828	0,7493	0,7396	0,8148	0,8954	1,9602**	1,9897**	1,9587**	1,9586**	1,975**	1,9269**
	(1,2155)	(1,2106)	(1,216)	(1,2158)	(1,2136)	(1,2162)	(0,7989)	(0,7989)	(0,7991)	(0,7995)	(0,7991)	(0,8012)
Left-wing government		-0,0647***						-0,0033				
		(0,0258)						(0,0171)				
Centrist government		-0,072**						-0,0177				
		(0,0296)						(0,0199)				
Parliamentary election			0,0024						-0,0014			
			(0,0252)						(0,0166)			
Parliamentary election * Left-wing government				-0,0173						-0,0193		
				(0,0404)						(0,0267)		
Parliamentary election * Centrist government				0,0014						0,0059		
				(0,0507)						(0,0333)		
Parliamentary election * Right-wing government				0,0765**						0,0081		
				(0,0345)						(0,0227)		
Military bases					0,1117***						0,0229	
					(0,0484)						(0,0515)	
Military bases * Left-wing						-0,0903**						-0,0319
						(0,0419)						(0,0876)
Military bases * Centrist						0,3199**						-0,0684
						(0,1258)						(0,1415)
Spatial error parameter rho	-0,3503	-0,3399	-0,3486	-0,3572*	-0,3564*	-0,3519	-0,3824***	-0,3866***	-0,3823***	-0,3763***	-0,388***	-0,3783***
	(0,2149)	(0,2203)	(0,2149)	(0,2157)	(0,2151)	(0,2145)	(0,145)	(0,1472)	(0,145)	(0,1452)	(0,0557)	(0,145)
Spatial autoregressive coefficient lambda	0,1469**	0,1862***	0,1467**	0,1459**	0,1552**	0,1529**	0,1183**	0,1313**	0,1182**	0,1138**	0,1203**	0,1177**
	(0,0697)	(0,0718)	(0,0698)	(0,0703)	(0,0689)	(0,0687)	(0,0556)	(0,0586)	(0,0556)	(0,0564)	(0,1453)	(0,0558)
Baltagi-Song-Jung-Koh test statistics	5,3617	6,1798	5,4738	5,3400	5,4736	5,4190	7,8721	7,9458	7,4951	7,6171	7,8973	8,0161
Baltagi-Song-Jung-Koh test p-value	0,0206	0,0129	0,0193	0,0208	0,0193	0,0199	0,0050	0,0048	0,0062	0,0058	0,0050	0,0046
Observations	638	638	638	638	638	638	638	638	638	638	638	638
Number of countries	29	29	29	29	29	29	29	29	29	29	29	29

Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Table 4. Robustness checks – Panel Corrected Standard Errors method

Dependent variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	Total military expenditures			Military personnel expenditures			Military equipment expenditures			Other military expenditures			Armed forces personnel	
Lagged dependent variable	0.964***	0.967***	0.967***	0.972***	0.968***	0.968***	0.727***	0.722***	0.726***	0.958***	0.965***	0.965***	0.987***	0.989***
	(0.0126)	(0.0121)	(0.0120)	(0.0118)	(0.0127)	(0.0127)	(0.0457)	(0.0431)	(0.0427)	(0.0123)	(0.0119)	(0.0120)	(0.0469)	(0.0439)
NATO membership	0.0195*	0.0188*	0.0197*	0.0066	0.0044	0.0048	0.0563*	0.0728**	0.0722**	0.0362**	0.0343**	0.0348**	0.108	0.103
	(0.0113)	(0.0109)	(0.0110)	(0.0083)	(0.0088)	(0.0085)	(0.0315)	(0.0317)	(0.0310)	(0.0172)	(0.0170)	(0.0170)	(0.0741)	(0.0670)
Log GDP (first difference)	-0.194	-0.156	-0.188	-0.766***	-0.820***	-0.829***	0.625	0.848	0.827	-0.401	-0.398	-0.414	-0.467	-0.556
	(0.251)	(0.259)	(0.259)	(0.205)	(0.206)	(0.204)	(0.521)	(0.528)	(0.531)	(0.331)	(0.348)	(0.349)	(1.020)	(0.987)
Log population (first difference)	-0.619	-0.692	-0.696	-0.680	-0.972*	-0.998*	-1.142	-0.423	-0.452	0.555	0.0115	0.0190	-11.03**	-9.841**
	(0.653)	(0.653)	(0.660)	(0.579)	(0.571)	(0.565)	(1.451)	(1.475)	(1.470)	(1.029)	(1.049)	(1.044)	(4.428)	(4.005)
Log other government expenditures	0.0120	-0.0073	-0.0019	-0.0717**	-0.0857**	-0.0840**	0.102	0.0923	0.0936	0.0806	0.0205	0.0245	0.263	0.225
	(0.0396)	(0.0369)	(0.0358)	(0.0361)	(0.0358)	(0.0355)	(0.123)	(0.124)	(0.123)	(0.0611)	(0.0538)	(0.0539)	(0.182)	(0.169)
NATO neighbours' military expenditures	0.0798	0.0616	0.0523	0.0928	0.0891	0.0902	0.134	0.161	0.160	0.0839	0.0726	0.0702		
	(0.103)	(0.104)	(0.104)	(0.101)	(0.0975)	(0.0976)	(0.220)	(0.215)	(0.216)	(0.179)	(0.184)	(0.184)		
Non-NATO neighbours' military expenditures	0.190**	0.174**	0.156**	0.135**	0.141**	0.132**	0.215	0.184	0.178	0.226*	0.179	0.181		
	(0.0778)	(0.0795)	(0.0783)	(0.0672)	(0.0658)	(0.0668)	(0.204)	(0.197)	(0.197)	(0.119)	(0.121)	(0.123)		
Russia and Belarus military expenditures	0.886**	0.427***	0.426***	0.107	0.0948	0.0942	0.249*	0.238	0.227	0.284*	0.300*	0.300*		
	(0.444)	(0.128)	(0.127)	(0.104)	(0.101)	(0.0997)	(0.135)	(0.151)	(0.161)	(0.151)	(0.165)	(0.164)		
Death casualties of terrorist attacks	0.0023	0.0026	0.0027	0.0026*	0.0026*	0.0024*	0.0104*	0.0112**	0.0117**	0.0018	0.0037*	0.0038*	-0.0085	-0.0059
	(0.0017)	(0.0018)	(0.0018)	(0.0014)	(0.0015)	(0.0013)	(0.0057)	(0.0053)	(0.0055)	(0.0023)	(0.0022)	(0.0022)	(0.0097)	(0.0088)
US soldiers to population	0.0459	-0.0078	-0.0230	-0.187	-0.273	-0.302*	0.687*	0.313	0.319	-0.102	-0.321	-0.328	0.178	-0.0867
	(0.264)	(0.258)	(0.264)	(0.153)	(0.167)	(0.166)	(0.412)	(0.350)	(0.366)	(0.530)	(0.529)	(0.526)	(1.878)	(1.783)
Refugees to population ratio	1.139*	1.173*	1.206*	0.172	0.185	0.259	0.703	0.651	0.717	2.056**	1.762	1.814*	-0.963	-0.824
	(0.620)	(0.639)	(0.626)	(0.485)	(0.487)	(0.488)	(0.770)	(0.810)	(0.819)	(1.032)	(1.082)	(1.084)	(0.808)	(0.895)
Left-wing government		0.0053	0.0064		0.0248***	0.0143		-0.0929***	-0.0946***		-0.0038	0.0030	-0.0720*	
		(0.0087)	(0.0110)		(0.0087)	(0.0100)		(0.0251)	(0.0291)		(0.0140)	(0.0167)	(0.0431)	
Centrist government		0.0001	-0.0122		0.0036	-0.0035		-0.101***	-0.113***		-0.0158	-0.0193	0.0207	
		(0.0128)	(0.0142)		(0.0116)	(0.0124)		(0.0324)	(0.0351)		(0.0181)	(0.0204)	(0.0497)	
Parliamentary election		0.0135			0.0139*			0.0152			-0.0113			0.0255
		(0.0102)			(0.0071)			(0.0194)			(0.0165)			(0.0290)
Left-wing gov. * parliamentary election			-0.0030			0.0319**			0.0030			-0.0328		
			(0.0164)			(0.0140)			(0.0316)			(0.0276)		
Centrist gov. * parliamentary election			0.0595**			0.0267			0.0623			0.0111		
			(0.0270)			(0.0190)			(0.0519)			(0.0407)		
Right-wing gov. * parliamentary election			0.0045			-0.0049			0.0035			-0.0060		
			(0.0141)			(0.0093)			(0.0296)			(0.0224)		
Government position on military affairs	0.0055*			0.0018			0.0164**			0.0149***				
(CMP)	(0.0029)			(0.0029)			(0.0073)			(0.0042)				
Constant	-0.0832	-0.0143	-0.0302	0.237*	0.281**	0.282**	-0.719	-0.629	-0.624	-0.332	-0.0783	-0.0942	-0.954	-0.862
	(0.154)	(0.144)	(0.141)	(0.142)	(0.139)	(0.138)	(0.477)	(0.480)	(0.473)	(0.239)	(0.210)	(0.210)	(0.654)	(0.614)
Wooldridge (2002) test statistics	38.684	38.644	38.532	112.04	115.53	117.16	1.998	2.073	2.124	70.170	75.824	71.618	1740.1	2797.5
Wooldridge (2002) test p-value	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1685	0.1610	0.1561	0.0000	0.0000	0.0000	0.0000	0.0000
Observations	638	638	638	638	638	638	638	638	638	638	638	638	638	638
R-squared	0.961	0.961	0.962	0.966	0.967	0.967	0.767	0.780	0.779	0.961	0.961	0.961	0.939	0.950
Number of countries	29	29	29	29	29	29	29	29	29	29	29	29	29	29

Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Table 5. Robustness checks – SAC (SARAR) method

Dependent variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	Total military expenditures			Military personnel expenditures			Military equipment expenditures			Other military expenditures			Armed forces personnel	
Lagged dependent variable	0.966***	0.9672***	0.9672***	0.9821***	0.9803***	0.9804***	0.7236***	0.7218***	0.7220***	0.9499***	0.955***	0.9549***	1.0098***	1.0072***
	(0.0104)	(0.0107)	(0.0107)	(0.0086)	(0.0088)	(0.0088)	(0.0269)	(0.027)	(0.027)	(0.0116)	(0.0117)	(0.0117)	(0.0118)	(0.0116)
NATO membership	0.0199	0.0212*	0.0219*	0.0035	0.0021	0.0019	0.0414	0.0489*	0.0507*	0.0313	0.0361*	0.0373*	0.0607	0.0625
	(0.0121)	(0.0123)	(0.0123)	(0.0089)	(0.0089)	(0.0089)	(0.0285)	(0.0285)	(0.0285)	(0.0191)	(0.0195)	(0.0195)	(0.0431)	(0.0427)
Log GDP (first difference)	0.0517	0.0476	0.0232	-0.5834***	-0.6142	-0.6213	0.6254	0.7292	0.6922	-0.5686*	-0.5732*	-0.5899*	-0.9068	-0.8964
	(0.2006)	(0.2021)	(0.2015)	(0.1567)	(0.156)	(0.1556)	(0.4871)	(0.4884)	(0.488)	(0.3179)	(0.3212)	(0.3215)	(0.702)	(0.7022)
Log population (first difference)	-0.6139	-0.8379	-0.8243	-0.4621	-0.6527	-0.6569	-1.3672	-1.9625	-1.9333	0.4144	0.019	0.0409	-5.2939**	-5.6406***
	(0.5847)	(0.5831)	(0.5809)	(0.4627)	(0.4538)	(0.4521)	(1.3529)	(1.3241)	(1.3215)	(0.9059)	(0.9022)	(0.902)	(2.128)	(2.1308)
Log other government expenditures	0.0222	0.0038	0.0035	-0.0527*	-0.0647**	-0.0657**	0.0711	0.022	0.0231	0.0663	0.021	0.022	-0.0215	-0.0335
	(0.0372)	(0.0365)	(0.0363)	(0.0292)	(0.0281)	(0.028)	(0.0876)	(0.0855)	(0.0853)	(0.0598)	(0.0583)	(0.0583)	(0.129)	(0.1295)
Non-NATO neighbours' military expenditures	0.1263*	0.1214*	0.1137*	0.0536	0.0601	0.0548	0.3136*	0.2715	0.2644	0.219**	0.1924*	0.1908*		
	(0.0685)	(0.0688)	(0.0686)	(0.0533)	(0.0529)	(0.0528)	(0.1679)	(0.1677)	(0.1676)	(0.11)	(0.1107)	(0.1108)		
Russia and Belarus military expenditures	0.4333	0.43	0.4259	0.1356*	0.1309*	0.1257*	0.2209	0.179	0.1769	0.3314**	0.3255**	0.3262**		
	(0.0953)	(0.096)	(0.0956)	(0.0737)	(0.0736)	(0.0734)	(0.2321)	(0.2328)	(0.2323)	(0.152)	(0.1534)	(0.1534)		
Death casualties of terrorist attacks	0.0023	0.0027	0.0027	0.0019	0.0018	0.0017	0.0099	0.0112	0.0114	0.001	0.002	0.0021	-0.0055	-0.0069
	(0.0031)	(0.0031)	(0.003)	(0.0024)	(0.0024)	(0.0024)	(0.0075)	(0.0075)	(0.0075)	(0.0049)	(0.005)	(0.0049)	(0.0108)	(0.0108)
US soldiers to population	0.0651	-0.0534	-0.0629	-0.238	-0.3028	-0.3137	0.8256	0.2863	0.2822	-0.1248	-0.3972	-0.3953	-0.521	-0.6648
	(0.3781)	(0.3818)	(0.3801)	(0.2988)	(0.299)	(0.2978)	(0.9284)	(0.9298)	(0.9288)	(0.6124)	(0.6225)	(0.6219)	(1.4)	(1.4001)
Refugees to population ratio	1.0898**	1.035**	1.1027**	0.173	0.1742	0.2136	0.9937	0.8833	0.976	2.1896***	1.9877**	2.0214**	-0.7908	-0.6244
	(0.4983)	(0.498)	(0.4968)	(0.3869)	(0.3825)	(0.3818)	(1.2177)	(1.2109)	(1.2105)	(0.7976)	(0.7991)	(0.8002)	(1.7384)	(1.7454)
Left-wing government		0.0105	0.01		0.0222***	0.0139		-0.0747***	-0.0764***		-0.0033	0.0051	-0.0705*	
		(0.0105)	(0.0122)		0.0082	(0.0095)		(0.0258)	(0.03)		(0.0171)	(0.0199)	(0.0371)	
Centrist government		-0.0039	-0.0183		0.0045	-0.0059		-0.072**	-0.0869***		-0.0178	-0.0213	0.0187	
		(0.0123)	(0.0139)		0.0095	(0.0107)		(0.0297)	(0.0336)		(0.0199)	(0.0226)	(0.0427)	
Parliamentary election		0.0103			0.0135*			0,0004			-0.0019			0.0181
		(0.0103)			0.008			(0.0251)			(0.0166)			(0.0364)
Left-wing gov. * parliamentary election			-0.0017			0.0254*			-0.0389			-0.0271		
			(0.0181)			(0.0141)			(0.0443)			(0.0294)		
Centrist gov. * parliamentary election			0.0577**			0.0364**			0.0638			0.0218		
			(0.0224)			(0.0173)			(0.0547)			(0.0362)		
Right-wing gov. * parliamentary election			-0.0029			-0.0056			-0.0013			0.0051		
			(0.0152)			(0.0118)			(0.0372)			(0.0246)		
Government position on military affairs	0.0061**			0.0023			0.0154**			0.0146***				
	(0.0029)			(0.0022)			(0.0071)			(0.0049)				
Spatial error parameter rho	-0.2798**	-0.273*	-0.2672*	-0.4547***	-0.4569***	-0.4564***	-0.3323	-0.3396	-0.3481	-0.3732***	-0.3864***	-0.3802***	-0.2966*	-0.2731*
	(0.14)	(0.1411)	(0.1408)	(0.1386)	(0.1384)	(0.1383)	(0.2141)	(0.2203)	(0.2195)	(0.1449)	(0.1472)	(0.147)	(0.1534)	(0.1524)
Spatial autoregressive coefficient lambda	0.1523***	0.1738***	0.1717***	0.0331	0.0277	0.0269	0.1343**	0.1861***	0.1855***	0.1383**	0.1313**	0.1301**	-0.0706	-0.0687
	(0.056)	(0.0579)	(0.0578)	(0.0403)	(0.0396)	(0.0395)	(0.0709)	(0.0718)	(0.0708)	(0.0572)	(0.0586)	(0.0587)	(0.0818)	(0.0819)
Baltagi-Song-Jung-Koh test statistics	29.9601	34.4765	36.9921	4.6849	4.277	4.5035	4.5763	6.2693	6.269	6.6553	7.5837	7.9119	0.0214	0.0195
Baltagi-Song-Jung-Koh test p-value	0.0000	0.0000	0.0000	0.0304	0.0386	0.0338	0.0324	0.0123	0.0123	0.0099	0.0059	0.0049	0.8837	0.8889
Observations	638	638	638	638	638	638	638	638	638	638	638	638	638	638
R-squared	0.961	0.961	0.962	0.966	0.967	0.967	0.767	0.780	0.779	0.961	0.961	0.961	0.939	0.950
Number of countries	29	29	29	29	29	29	29	29	29	29	29	29	29	29

Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

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