Burden-sharing for global cooperation on safety and security

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Abstract

Across the world, the perceived common ground regarding global safety and security is changing. Facing divergent threats, in addition to their cooperation on defense states will increasingly need to collaborate on additional dimensions to protect their citizens. Hence, next to the military burden-sharing debate, questions as to whether states are contributing their fair shares in other arenas as well will be subject to debate also. This article analyzes national contributions by 28 NATO states to five dimensions connected to today's safety and security situation, namely military expenditures, foreign aid, combating terror financing, carbon dioxide reductions, and refugee protection. We find that states vary in their contributions to safety and security, each preferring to fund some dimensions more than others. We suggest that acknowledging and allowing for a certain degree of complementarity among states could help transform the debate on burden-sharing, which is cost-focused, to include benefit-sharing behavior. Thus, it may become possible to value every country's contributions and, building on national strengths, to further cooperation for safety and security along all necessary dimensions.

From its inception in 1949, the topic of military burden-sharing behavior has featured among NATO member states, at time covertly but often prominently. Former U.S. ambassador to the European Union, Anthony Gardner, has argued that burden-sharing discussions should not only focus on military expenditures alone, but should include soft power issues such as immigration and climate change. In its reaction, the Trump administration stated that it is not pursuing burden-sharing agreements regarding soft issues.[1]

According to Cottey, global security threats refer to multiple public goods ranging across widely divergent realms, such as environment, health, mass migration, and transnational organized crime. Depending on the public goods they contribute to, states may under-contribute in one realm and over-contribute in another. In developing a two-country, two-public goods model allowing for tradeoffs between alliance members, Boyer broadened the scope of the burden-sharing debate beyond "the narrow military approach." Testing the model empirically by analyzing member states' contributions to military expenditure and foreign aid, Boyer finds different policy preferences among states to be beneficial as it allows for specialized contributions to alliance security.[2]

Adding states' contributions to the United Nations and to world CO_2 reductions on top of the parameters of defense and development aid, Chalmers extended Boyer's research. More recently, instead of analyzing national contributions to various dimensions of safety and security separately, Sandler and Shimizu used a broader security burden-sharing measure, totaling all expenditures on defense, peacekeeping, and foreign aid per ally.[3]

Against this background, our article investigates national contributions to common safety and security dimensions, comprising defense, terror, irregular migration, poverty, and climate change. As such, the article builds on Boyer's and Chalmers' previous work. In contrast to Sandler and Shimizu, we do not provide an overarching burden-sharing yardstick on safety and security. Neither do we provide, for each state, the sum of its contributions to various dimensions. One reason for this is that to obtain insight into how burdens are being shared we will not analyze financial contributions only but other measures as well. Moreover, one should consider adding weighting factors to divergent safety and security dimensions for the purpose of generating an overarching burden-sharing yardstick.

The normative use of language in this article is grounded in our hope to help recast the burden-sharing debate, however slightly. To do so necessarily requires a "what *should* be measured" criterion. This is not to say that the particular measures we put forward are the only ones worth considering. On the contrary, we acknowledge that our indicator choices are indicative and are meant to help start a broadened discussion.

The remainder of the article is structured as follows. The

next section explains our method of inquiry and presents the data sources. This is followed by a descriptive record of national contributions to international safety and security on five dimensions: military contributions, foreign aid, combating terror finance, carbon dioxide reductions, and refugee protection. Although this could be extended to comprise all countries in the world, we limit it here to NATO member states (as of 2015, hence excluding Montenegro which accessed in 2017) as these are part of an alliance and data are readily available. The section thereafter uses pairwise Spearman rank correlation tests to analyze relations between states' contributions to the five dimensions. We find that member states not only contribute differently to safety and security but that each state appears to prefer investments in specific dimensions over other dimensions. In the concluding section we argue that acknowledging and allowing for a degree of complementarity among member states regarding their national preferences, the debate on burden-sharing behavior could be transformed into one that emphasizes benefit-sharing behavior. Thus, it may become possible to value every contribution and, building on national strengths, to further cooperation for safety and security on all necessary dimensions.

Method

We cannot analyze the vast array of all possible contributions to international safety and security and limit ourselves to just five: military contributions (defense expenditures), foreign aid (overseas development aid, ODA), combating terror financing (compliance with financial standards), carbon dioxide reductions (metric tons of CO_2 reductions), and refugee protection (asylum acceptance, or recognition, rates). Selected in accordance with threats mentioned in various national strategy documents, these comprise threats posed by states, terror, irregular migration, poverty, and climate change.

Between and among these threats causalities appear. For instance, the UN Intergovernmental Panel on Climate Change (IPCC) reports that if baseline global warming exceeds 1.5 degrees Celsius, droughts, floods, extreme heat, and poverty will increase significantly, potentially affecting the livelihoods of hundreds of millions of people and causing uncontrollable migrant flows. Similarly, Carleton, Hsiang, and Burke find that climatological factors relate to a range of conflict outcomes across the globe. As mentioned, the specific measures we use are merely indicative and primarily serve to broaden the debate. Taking foreign aid as an example: In the United States

Table 1: Overview

Dimension	Measure	Period	Source	Table
Military	Defense expenditure (% of GDP)	2005–15	NATO (2017)	A1
Foreign aid	ODA (% of GNI)	2005–15	OECD (2017)	A2
Combating terror finance	Compliance rate	Last available	FATF (2017)	A3
Carbon dioxide	Metric tons of CO_2 reductions	2005–15	EU (2017)	A4
Refugee protection	Recognition rate	2005–15	UNHCR (2017)	A5

it is argued that as private-sector foreign aid flows are relatively large as compared to public ODA flows, the sum total of private and public funding used for foreign aid purposes would constitute a better measure. Whether to use the broad or the narrow measure is debatable. Meanwhile, for each safety and security dimension, Table 1 shows our preferred measure, the time period, data source, and the specific tables with the data details per NATO member state.[4]

On some dimensions (e.g., military contribution, CO_2 reductions, refugee protection) multi-criteria burden-sharing measures are available. Compared to single-criterion measures, these are less sensitive to special circumstances characterizing individual states. However, an analysis based on multiple measures is complex. Different measures will result in different rankings and outcomes, and it is not clear what weighting factors to apply. For simplicity, we apply a single burden-sharing measure to each dimension, underpinned by literature, and for which data covering reasonably long time periods are available.[5]

Raw data
Military contributions

Researchers have studied burden-sharing behavior regarding military contributions using dissimilar methods. We use the within-ally parameter to measure NATO members' burden-sharing behavior, i.e., the ratio of defense spending to GDP. In the Wales Summit Declaration of 2014, NATO member heads of state committed themselves formally to aim for a minimum of defense spending of two percent of their GDP, including a minimum of twenty percent of the defense budget on major new equipment. States failing to comply would be allowed one decade of time to increase defense expenditures and investment in major weapon systems accordingly.[6]

For the period 2005–15, Table A1 (in the Appendix) shows defense expenditures as a percentage of GDP. In 2015, five states meet the two percent goal: Estonia (2.07), Greece (2.38), Poland (2.23), the U.K. (2.09), and the U.S. (3.59). The U.S. bears the heaviest burden. In 2015, states that contributed less than one percent were Luxembourg (0.43), Belgium (0.91), Spain (0.92), Hungary (0.94), and Canada (0.98). The average contribution of the European states (1.33) was lower than that of the North American states (2.29).

Foreign aid

At least as from 1945 onward, when the United States initiated its Marshall Plan to help rebuild war-torn Western European economies, thereby preventing the region to be unduly affected by communist influence, financial aid has been seen as serving a security function, at least in part. During the 1950s and 1960s, U.S. financial foreign aid mainly aimed to fortify cold war-allied partners in Europe and East Asia; in contrast, Western European states spent much of their foreign aid to protect economic interests in (former) colonial territories.[7]

In 1961, the Organization for Economic Cooperation and Development (OECD) was founded. It commissioned its Development Assistance Committee (DAC) to provide a framework for distributing foreign aid burdens more equally among donor countries. By the mid-1980s, DAC, excluding the U.S. and Switzerland, agreed on a target of spending 0.7 percent of gross national income (GNI) on development assistance. Little empirical research exists on the burden-sharing behavior of national governments regarding their expenditures on foreign aid (e.g., the amount of funding spent to benefit aid agencies). Table A2 shows overseas development assistance as a percentage of GNI for NATO states.[8]

For 2015, the table shows five states scoring above the 0.7 percent target: Norway (1.05), Luxembourg (0.95), Denmark (0.85), the Netherlands (0.75), and the U.K. (0.70). The lowest-scoring states comprise former Warsaw Pact members: Bulgaria (0.09), Latvia (0.09), Romania (0.09), Poland (0.18), and Slovakia (0.10). The average foreign aid contribution of European member states (0.34) surpasses the U.S. contribution (0.17). European member states, and particularly northern European nations, bear the heaviest burden.

Combating terror financing

One strategy to eliminate, or at least to contain, terror threats is to understand the ways in which terror organizations and networks obtain financial resources. Following the money trail can lead to financiers and perpetrators of acts of terror. After the 9/11 attacks, the UN Security Council adopted resolution 1373, which mandates all UN member states to prevent and

A long-standing academic and policy debate exists on NATO members' burden-sharing behavior, particularly in regard to military expenditure levels. At times, the debate has been extended to include other measures such as foreign aid and peacekeeping contributions. This article broadens the discussion by thinking normatively about safety and security at large. Empirical analysis shows a correlation of zero of members' spending across five global safety and security dimensions examined. States' spending is idiosyncratic. In the conclusion, the article suggests that it might be helpful to change to debate from one that emphasizes *burden-sharing* to one that emphasizes *benefit-sharing*.

suppress the financing of terror acts, to criminalize the provision of funds to terror organizations, and to freeze funds of persons and groups engaged in terror-related activities. Additionally, the Financial Action Task Force (FATF) decided to expand on its 40 standards for combating money laundering with eight standards to fight terror financing. (In October 2004 an additional, ninth, standard was put forward.) The standards aim to provide a comprehensive and consistent framework for states to combat money laundering and terror financing. Over 190 jurisdictions worldwide are committed to FATF standards, and compliance levels of individual states are assessed by experts associated with FATF. In line with FATF assessment methodology, compliance with each standard is validated across four categories. "Compliant" means that a country observes a standard fully with respect to all essential criteria; "largely compliant" means there are only minor shortcomings, with a large majority of the essential criteria being fully met; "partially compliant" says that a country has taken some substantive action and complies with some essential criteria; finally, countries assessed as "non-compliant" on a standard are judged to suffer major shortcomings, with a large majority of the essential criteria not being met. "Compliant" scores 3 points, and "largely compliant," "partially compliant," and "non-compliant" score 2, 1, and 0 points, respectively.[9]

Table A3 shows average compliance scores. Numeric column 4 lists compliance ranks using all 49 standards; column 6 does so using only the 40 anti-money laundering standards, and column 8 shows the ranks for the nine anti-terror financing standards. On anti-terror financing, three states (Albania, Croatia, Iceland) score below even the partially compliant level (i.e., <1), indicating major shortcomings. States scoring between 1 and 2 have taken some substantive action but, as yet, do not comply with all essential criteria. States scoring over 2 show minor shortcomings, fully meeting most essential criteria. The U.K., Spain, and Italy hold the top spots, followed by Canada and the U.S. Combating terror financing is a weakest-link good in that high-performing states cannot

Table 2: NATO member states' contributions to five dimensions of global safety and security

Military		Foreign aid		Anti-terror finance		CO_2 reductions		Refugee protection	
Lowest	*Highest*	*Lowest*	*Highest*	*Lowest*	*Highest*	*Lowest*	*Highest*	*Lowest*	*Highest*
Luxemb.	U.S.	Bulgaria	Norway	Croatia	U.K.	Estonia	Greece	Hungary	Netherl.
Belgium	Greece	Latvia	Luxemb.	Albania	Spain	Turkey	Italy	Croatia	Canada
Spain	Poland	Romania	Denmark	Iceland	Italy	Iceland	Spain	Slovenia	Italy
Hungary	U.K.	Poland	Netherl.	Romania	Canada	Albania	U.K.	Greece	Bulgaria
Canada	Estonia	Slovakia	U.K.	Greece	France	Bulgaria	Denmark	Slovakia	U.S.

compensate for lower-performing partners. Consequently, higher average performance levels across all states can only be reached by helping weakest-link states to increase compliance levels.[10]

Carbon dioxide reductions

Climate change challenges international security. During the 21st UN Climate Conference in Paris, December 2015, 195 states agreed to prevent a global average temperature rise to exceed two degrees Celsius, and hoping to limit temperature increases to a maximum of 1.5 degrees Celsius. But to reach even the two-degree limit, significant reductions of CO_2 emissions are necessary. Table A4 shows the extent to which states have been doing so, for 2005–15. Greece, Italy, Spain, the U.K., and Denmark show the largest reductions—perhaps in part because of economic decline or stagnation in the first three of these—whereas Albania, Bulgaria, Estonia, Iceland, and Turkey show increased CO_2 emissions but, except for Turkey, these are on a fairly small scale. Canada and Germany have reached large absolute emission reductions, yet in percentage terms they are relatively small, perhaps too small to help reach the stated goal of the global climate agreement.[11]

Mass migration and refugee protection

Mass migration can endanger international security because of destabilizing effects resulting from refugee flows and border tensions. Schuck argues that criteria for allocating refugee burdens across nations should be based on states' capacity to provide refugees with minimal safeguards and comfort to which they are entitled under the Refugee Convention and consequently suggests to apply national wealth as a criterion for assigning refugees quotas. Using a state's wealth as the sole criterion neglects, however, important factors such as population density, land surface, national cultures and traditions, public support, and/or national labor markets, all of which affect states' willingness and ability to receive and protect refugees, or other migrants.[12]

To investigate burden-sharing behavior, we instead derive recognition rates, i.e., the number of positive asylum decisions divided by the total number of applications. Accordingly, for 2005–15, Table A5 shows the average number of applications submitted, the average number accepted, and the resulting recognition rates (columns 2, 4, and 6, respectively). Germany, France, and the U.S. score high in absolute numbers on the "applied" and the "accepted" parameters, but Germany and France score only average on the relative measure, the recognition parameter. Hungary scores relatively high on the number of submitted applications (rank 8), but has the lowest recognition rate of all states (rank 28). The Netherlands, Canada, Italy, Bulgaria, and the U.S. sport the highest recognition rates.[13]

Analysis

Table 2 synthesizes Tables A1 to A5 and shows the five lowest and the five highest contributors across our five dimensions. On four of the five dimensions, the U.K. performs in the top-5, whereas the U.S. comes in first on just one dimension, its military contribution to the NATO alliance. Some member states contribute relatively much to one dimension and little to another. Estonia, for example, spends over two percent of its GDP on military contributions, as opposed to 0.15 percent of its GNI on foreign aid. It also shows the highest percentage increase in CO_2 emissions. Luxembourg, in contrast, spends little on its military (0.43%) and relatively much on foreign aid (0.95%). Excepting the U.K., it appears that states that devote a large part of their GDP to military contributions do not always contribute as highly to foreign aid, CO_2 reductions, counter-terror financing compliance, and/or refugee protection. To supplement this qualitative analysis, we use pairwise Spearman rank correlation tests. The null (H_0) and alternative (H_A) hypotheses are as follows:

H_0: No association exists between states' contributions to the five safety and security dimensions.

Table 3: Pairwise Spearman rank correlation coefficients and probability values

Year	ρ (1,2)	ρ (1,3)	ρ (1,4)	ρ (1,5)	ρ (2,3)	ρ (2,4)	ρ (2,5)	ρ (3,4)	ρ (3,5)	ρ (4,5)
2005	−0.08	−0.63	−0.08	−0.06	−0.63	0.49**	0.51**	0.00	−0.40	0.16
	(0.71)	(0.37)	(0.70)	(0.78)	(0.37)	(0.02)	(0.012)	(1.00)	(0.60)	(0.41)
2006	−0.21	−0.05	−0.18	0.06	−0.15	0.27	−0.03	0.58**	−0.27	0.00
	(0.33)	(0.89)	(0.39)	(0.78)	(0.64)	(0.21)	(0.91)	(0.05)	(0.40)	(0.99)
2007	−0.33	−0.21	−0.40*	0.12	0.06	0.40*	0.16	0.65***	0.00	−0.09
	(0.13)	(0.47)	(0.06)	(0.58)	(0.84)	(0.06)	(0.46)	(0.00)	(0.99)	(0.64)
2008	−0.37*	−0.17	0.25	0.07	0.11	−0.18	0.21	−0.08	0.14	−0.02
	(0.08)	(0.50)	(0.24)	(0.75)	(0.66)	(0.38)	(0.31)	(0.73)	(0.54)	(0.93)
2009	−0.05	−0.17	−0.22	0.15	0.25	−0.45**	0.23	0.30	0.06	−0.33*
	(0.81)	(0.47)	(0.28)	(0.47)	(0.30)	(0.02)	(0.26)	(0.18)	(0.79)	(0.08)
2010	0.03	−0.02	0.11	0.12	0.24	0.17	0.19	−0.04	0.23	−0.20
	(0.88)	(0.95)	(0.58)	(0.56)	(0.29)	(0.41)	(0.37)	(0.86)	(0.30)	(0.32)
2011	0.07	0.01	−0.02	0.13	0.24	0.31	0.36*	0.36*	0.21	0.01
	(0.74)	(0.95)	(0.91)	(0.52)	(0.23)	(0.12)	(0.07)	(0.06)	(0.27)	(0.97)
2012	0.14	−0.06	−0.05	0.15	0.12	0.17	0.38*	0.24	0.36*	0.10
	(0.51)	(0.76)	(0.79)	(0.45)	(0.55)	(0.39)	(0.06)	(0.22)	(0.06)	(0.61)
2013	0.12	0.03	−0.21	−0.04	0.10	−0.38*	0.21	−0.03	0.21	0.15
	(0.57)	(0.88)	(0.30)	(0.85)	(0.63)	(0.06)	(0.30)	(0.88)	(0.29)	(0.45)
2014	0.15	−0.18	0.08	−0.03	0.06	0.17	0.16	0.24	0.09	0.11
	(0.49)	(0.37)	(0.68)	(0.88)	(0.77)	(0.42)	(0.43)	(0.22)	(0.67)	(0.58)
2015	−0.05	−0.21	0.34*	0.26	0.06	0.35*	0.32	−0.29	−0.14	0.21
	(0.81)	(0.29)	(0.09)	(0.20)	(0.77)	(0.08)	(0.11)	(0.13)	(0.47)	(0.28)

Notes: 1. Military expenditure/GDP (%); 2. ODA/GNI (%); 3. anti-terror finance compliance (%); 4. CO_2 reductions (%); 5. refugee recognition rates (%). Statistically significant at the 1% (***), 5% (**), and 10% (*) levels, respectively.

H_A: An association does exist between states' contributions to the five safety and security dimensions.

Rejection of H_0 is indicative of either a positive or negative correlation between states' ranks on any pairwise set of safety and security dimensions. Table 3 lists the rank correlations (with probability values in parentheses). The tabulated coefficients show no systematic pairwise associations. Across the years, signs flip for pairwise tests, and very few of the tests are statistically significant (statistically different from zero), with none concentrated in any one pairwise comparison column. Thus, for the entire set of comparisons, the null hypothesis cannot be rejected. This is consistent with our previous conclusion, from Table 2: States scoring high on one safety and security dimension do not necessarily perform likewise on any other dimension.

Conclusions

This article shows how 28 NATO states contribute, across five dimensions, to global safety and security. We investigated four nonmilitary dimensions, using a limited number of measures. On its own, military expenditure as a percentage of GDP does not take into account political and societal complexities regarding safety and security. We expect therefore that measuring contributions solely in military terms will not deliver meaningful information on burden-sharing behavior. Our findings show that member states can and do contribute in different ways to global safety and security. Except for the U.K., which scores among the top-5 countries on four of our five dimensions, other states vary the extent to which they contribute across the five dimensions. No one state ranks lowest on all five. Instead, each state appears to invest in some dimension more than in others. As to why states contribute as they do, additional research seems necessary. From a defense economics perspective, it appears that states do not all value certain public goods equally, nor do they agree on any one particular scenario of pursuing shared strategies.

As member states seem to hold specific preferences regarding the production of (global) public goods, implicitly and explicitly agreeing on task specialization may ease disputes over burden-sharing behavior and increase mutual understanding, and may even offer new opportunities. Any one country could over-contribute to the production of a specific public good while under-contributing to others, presuming that the other states would condone and complement this behavior along other dimensions.

In terms of today's burden-sharing debate, seemingly geared toward the negative (i.e., the costs), this may appear

infeasible. At the heart of any burden-sharing debate on safety and security, however, there are objectives coveted by all. No single state possesses all of the necessary political, economic, and cultural resources to achieve all of the objectives. If, next to addressing the military costs incurred, states also devote some attention to highly desirable nonmilitary safety and security benefits, the burden-sharing debate may transform into a dialogue on benefit-sharing behavior. Using one's own and the other states' strengths to achieve mutual benefits, mutual understanding, and mutual recognition of the value of each other's contributions may sustain cooperation across all dimensions of safety and security.

Notes

We thank two anonymous reviewers for their helpful comments and cautionary notes. All remaining errors are ours.

1. CNBC (2017).

2. Boyer (1990).

3. Multiple public goods: Cottey (2007). Broadened the scope: Boyer (1989, p. 700). Adding UN and CO_2 measures: Chalmers (1993; 2000). Broader measure: Sandler and Shimizu (2014).

4. Migrant flows: IPCC (2018, p.53). Conflict outcomes: Carleton, Hsiang, and Burke (2016).

5. Less sensitive: Kawashima (1996).

6. Dissimilar methods: Olson and Zeckhauser (1966); Sandler, Cauley, and Forbes (1980); Oneal (1990); Khanna and Sandler (1996); Sandler and Murdoch (2000); Solomon (2004); Sandler (2005); Sandler and Shimizu (2014). Within-ally: Sandler and Hartley (2001). Wales Summit: NATO (2014, paragraph 14).

7. Chalmers (2000).

8. Little research: But see Boyer (1989); Chalmers (1993); Khanna and Sandler (1997); Addison, McGillivray and Odedokun (2004).

9. Money trail: Beeres and Bollen (2011, p. 92). Scoring of standards: Arnone and Padoan (2008).

10. Weakest-link: Bogers and Beeres (2013).

11. Reductions necessary: Ringius, Torvanger, and Holtsmark (1998); Ringius, Torvanger, and Underdal (2002); Hof, den Elzen, and van Vuuren (2010); Clémençon (2016).

12. Destabilizing effects: Thieleman (2018). Allocating refugee burdens: Schuck (1997).

13. Recognition rates: Vink and Meijerink (2003).

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Table A1: Defense expenditures as a percentage of gross domestic product

	2005–09	*2010*	*2011*	*2012*	*2013*	*2014*	*2015*	*Rank*
Albania	1.52	1.56	1.53	1.49	1.41	1.34	1.16	14
Belgium	1.11	1.08	1.05	1.05	1.01	0.97	0.91	23
Bulgaria	2.53	1.67	1.33	1.35	1.46	1.32	1.29	12
Croatia	1.62	1.54	1.60	1.53	1.47	1.41	1.37	10
Czech Republic	1.56	1.29	1.07	1.06	1.03	0.96	1.06	17
Denmark	1.33	1.41	1.30	1.34	1.23	1.16	1.14	16
Estonia	1.70	1.70	1.68	1.89	1.90	1.94	2.07	5
France	2.34	1.96	1.87	1.87	1.86	1.84	1.80	6
Germany	1.34	1.35	1.28	1.31	1.23	1.19	1.19	13
Greece	2.78	2.64	2.38	2.29	2.22	2.22	2.38	2
Hungary	1.25	1.04	1.05	1.04	0.95	0.87	0.94	21
Iceland	-	-	-	-	-	-	-	-
Italy	1.56	1.35	1.30	1.24	1.20	1.09	1.02	19
Latvia	1.48	1.06	1.02	0.89	0.93	0.94	1.04	18
Lithuania	1.15	0.88	0.79	0.76	0.76	0.88	1.14	16
Luxembourg	0.52	0.47	0.39	0.38	0.38	0.39	0.43	24
Netherlands	1.46	1.34	1.25	1.23	1.16	1.15	1.16	15
Norway	1.49	1.52	1.51	1.47	1.48	1.51	1.47	8
Poland	1.80	1.77	1.72	1.74	1.72	1.85	2.23	3
Portugal	1.57	1.49	1.49	1.41	1.44	1.30	1.32	11
Romania	1.63	1.24	1.28	1.22	1.28	1.35	1.45	9
Slovakia	1.56	1.27	1.09	1.10	0.99	0.99	1.14	16
Slovenia	1.52	1.61	1.30	1.18	1.06	0.98	0.94	21
Spain	1.19	1.03	0.94	1.04	0.92	0.91	0.92	22
Turkey	1.99	1.93	1.76	1.76	1.75	1.70	1.67	7
U.K.	2.42	2.51	2.42	2.20	2.30	2.20	2.09	4
Europe	**1.62**	**1.47**	**1.38**	**1.35**	**1.33**	**1.30**	**1.33**	
Canada	1.28	1.16	1.23	1.10	0.99	1.02	0.98	20
U.S.	4.28	4.81	4.77	4.42	4.09	3.78	3.59	1
North America	**2.78**	**2.99**	**3.00**	**2.76**	**2.54**	**2.40**	**2.29**	

Source: NATO (2017).

Table A2: Overseas Development Assistance as a percentage of gross national income

	2005-10	2011	2012	2013	2014	2015	Rank
Albania	-	-	-	-	-	-	-
Belgium	0.49	0.54	0.48	0.45	0.46	0.42	8
Bulgaria	0.09	0.09	0.08	0.10	0.09	0.09	19
Croatia	-	-	-	-	-	-	-
Czech Republic	0.10	0.13	0.12	0.11	0.11	0.12	17
Denmark	0.87	0.85	0.83	0.85	0.86	0.85	3
Estonia	0.09	0.12	0.11	0.13	0.15	0.15	15
France	0.42	0.46	0.45	0.41	0.37	0.37	9
Germany	0.33	0.39	0.37	0.38	0.42	0.52	6
Greece	0.18	0.15	0.13	0.10	0.11	0.12	17
Hungary	0.08	0.11	0.10	0.10	0.11	0.13	16
Iceland	0.23	0.20	0.20	0.23	0.22	0.24	11
Italy	0.19	0.20	0.14	0.17	0.19	0.22	12
Latvia	0.06	0.07	0.08	0.08	0.08	0.09	19
Lithuania	0.08	0.13	0.13	0.11	0.10	0.12	17
Luxembourg	0.89	0.97	1.00	1.00	1.06	0.95	2
Netherlands	0.80	0.75	0.71	0.67	0.64	0.75	4
Norway	0.93	0.96	0.93	1.08	1.00	1.05	1
Poland	0.07	0.08	0.09	0.10	0.09	0.10	18
Portugal	0.28	0.31	0.28	0.23	0.19	0.16	14
Romania	0.08	0.09	0.09	0.07	0.11	0.09	19
Slovakia	0.07	0.09	0.09	0.09	0.09	0.10	18
Slovenia	0.13	0.13	0.13	0.13	0.13	0.15	15
Spain	0.33	0.29	0.16	0.17	0.13	0.12	17
Turkey	0.10	0.17	0.32	0.40	0.45	0.50	7
U.K.	0.42	0.56	0.56	0.71	0.70	0.70	5
Europe	**0.30**	**0.33**	**0.32**	**0.33**	**0.32**	**0.34**	
Canada	0.29	0.32	0.32	0.28	0.24	0.28	10
U.S.	0.17	0.20	0.19	0.18	0.19	0.17	13
North America	**0.23**	**0.26**	**0.26**	**0.23**	**0.22**	**0.23**	

Source: OECD (2017).

Table A3: Compliance scores on anti-money laundering and combating terror financing

	Report	Year	FATF (49)	Rank (49)	FATF (40)	Rank (40)	FATF (9)	Rank (9)
Albania	MER	2011	1.31	21	1.41	19	0.89	13
Belgium	MER	2015	2.12	5	2.15	4	2.00	5
Bulgaria	MER	2008	1.94	10	1.95	11	1.89	6
Croatia	MER	2008	1.09	22	1.21	22	0.56	14
Czech Republic	MER	2011	1.62	17	1.61	17	1.67	8
Denmark	FER	2010	2.00	8	2.03	7	1.89	6
Estonia	FER	2014	1.92	11	1.97	10	1.67	8
France	MER	2011	1.94	10	1.90	12	2.11	4
Germany	FER	2014	2.00	8	2.00	8	2.00	5
Greece	FER	2011	1.31	21	1.31	20	1.33	11
Hungary	FER	2013	2.40	2	2.51	2	1.89	6
Iceland	MER	2006	1.46	20	1.59	18	0.89	13
Italy	MER	2016	2.20	3	2.20	3	2.22	3
Latvia	MER	2012	2.02	7	2.08	6	1.78	7
Lithuania	MER	2012	1.85	13	1.97	10	1.33	11
Luxembourg	FER	2014	1.31	21	1.28	21	1.44	10
Netherlands	FER	2014	1.82	14	1.75	16	2.11	4
Norway	MER	2014	1.88	12	1.83	14	2.11	4
Poland	MER	2013	1.75	16	1.79	15	1.56	9
Portugal	MER	2006	1.98	9	2.03	7	1.56	9
Romania	MER	2008	1.50	19	1.59	18	1.11	12
Slovakia	MER	2011	1.54	18	1.59	18	1.33	11
Slovenia	MER	2010	2.08	6	2.08	6	2.11	4
Spain	MER	2014	2.55	1	2.60	1	2.33	2
Turkey	FER	2014	1.79	15	1.87	13	1.44	10
U.K.	MER	2009	2.18	4	2.13	5	2.44	1
Europe			**1.83**	**1.86**		**1.68**		
Canada	MER	2016	1.94	10	1.90	12	2.11	4
U.S.	MER	2016	1.98	9	1.98	9	2.00	5
North America			**1.96**	**1.94**		**2.06**		

Source: FATF (2017). FATF (49) represents the total average compliance score on all 49 FATF recommendations of a state; FATF (40) is the total average compliance score on the 40 anti-money laundering standards of a state; FATF (9) is the total average compliance score on the 9 special standards to combat terror finance of a state; for scoring criteria, see main text. MER = mutual evaluation report; FER = follow-up evaluation report.

Table A4: Reduction of carbon dioxide emissions (in metric tons of CO_2)

	2005	2015	Change	Change (%)	Rank
Albania	4,137	4,439	302	6.80	25
Belgium	116,820	97,002	-19.818	-20.43	10
Bulgaria	52,068	53,432	1,364	2.55	24
Croatia	22,695	20,538	-2,157	-10.50	16
Czech Republic	127,283	111,092	-16,191	-14.57	13
Denmark	50,856	36,908	-13,948	-37.79	5
Estonia	17,769	29,252	11,483	39.26	28
France	410,066	327,787	-82,279	-25.10	8
Germany	830,597	777,905	-52,692	-6.77	19
Greece	103,910	68,292	-35,618	-52.16	1
Hungary	59,607	48,186	-11,421	-23.70	9
Iceland	3,126	3,874	748	19.31	26
Italy	492,898	352,886	-140,012	-39.68	2
Latvia	7,981	7,973	-8	-0.10	23
Lithuania	13,616	12,478	-1,138	-9.12	17
Luxembourg	12,046	10,235	-1,811	-17.69	12
Netherlands	179,600	165,317	-14,283	-8.64	18
Norway	43,291	43,109	-182	-0.42	21
Poland	308,755	294,879	-13,876	-4.71	20
Portugal	67,215	50,792	-16,423	-32.33	6
Romania	104,206	81,247	-22,959	-28.26	7
Slovakia	42,789	36,254	-6,535	-18.03	11
Slovenia	17,738	15,610	-2,128	-13.63	15
Spain	366,314	262,683	-103,631	-39.45	3
Turkey	248,620	357,157	108,537	30.39	27
U.K.	555,007	398,524	-156,483	-39.27	4
Europe	**4,259,010**	**3,667,851**	**-591,159**	**-16.12**	
Canada	557,423	555,401	-2,022	-0.36	22
U.S.	5,886,318	5,172,338	-713,980	-13.80	14
North America	**6,443,741**	**5,727,739**	**-716,002**	**-7.08**	

Source: EU (2017).

Table A5: Average asylum applications recognition rate, 2005–15

	Average applicants *(absolute)*	*Rank*	*Average applicants accepted (absolute)*	*Rank*	*Recognition rate (%)*	*Rank*
Albania	125	27	10	23	8.12	23
Belgium	28,637	7	5,501	9	19.21	15
Bulgaria	4,203	16	1,513	12	36.00	4
Croatia	496	21	16	23	3.22	27
Czech Republic	2,135	17	347	16	16.26	18
Denmark	7,097	14	2,411	11	33.97	6
Estonia	64	28	14	23	22.05	13
France	82,217	2	15,043	3	18.30	17
Germany	104,587	1	24,725	1	23.64	11
Greece	19,863	10	1,196	14	6.02	25
Hungary	23,683	8	309	17	1.31	28
Iceland	128	26	15	23	11.82	21
Italy	28,898	6	11,238	4	38.89	3
Latvia	148	25	18	23	12.11	20
Lithuania	280	24	57	21	20.23	14
Luxembourg	1,471	18	269	19	18.31	16
Netherlands	17,447	12	8,954	8	51.32	1
Norway	19,268	11	4,786	10	24.84	10
Poland	9,624	13	1,462	13	15.20	19
Portugal	304	23	79	20	25.98	8
Romania	1,269	19	297	18	23.37	12
Slovakia	1,242	20	77	20	6.18	24
Slovenia	460	22	25	22	5.47	26
Spain	5,438	15	620	15	11.40	22
Turkey	32,498	5	9,412	7	28.96	7
U.K.	42,820	4	11,024	5	25.75	9
Europe	**434,404**		**99,419**		**22.89**	
Canada	22,870	9	9,856	6	43.10	2
U.S.	60,750	3	21,271	2	35.01	5
North America	**83,620**		**31,128**		**37.23**	

Source: UNHCR (2017).