

*Conciliating International Defence Spending Targets and National Objectives*

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**Abstract**

Most NATO nations remain under pressure to increase national defence budgets, although this would be unlikely to improve significantly the Alliance response and deterrence capability. In the context of likely post-COVID 19 fiscal constraints, pressure should shift to meeting existing personnel requirements and increased participation towards more targeted and efficient contributions, along the lines of the “four-thirties” plan. While Canada has committed to increase defence spending with a view to continue to be a valued NATO partner as well as a committed international actor in uncertain times, the Canadian defence budget also balances responsibilities at home and in North America. While the larger countries will continue to assume the bulk of burden-sharing, unity, purpose and resilience of NATO will outweigh smaller country commitment to defence spending against GDP.

**Resumen**

*La mayoría de las naciones de la OTAN siguen bajo presión para aumentar los presupuestos de defensa nacional, aunque es poco probable que esto mejore significativamente la capacidad de respuesta y disuasión de la Alianza. En el contexto de las probables restricciones fiscales posteriores a COVID 19, la presión debería cambiar para cumplir con los requisitos de personal existentes y aumentar la participación hacia contribuciones más específicas y eficientes, en la línea del plan de los "cuatro-treintas". Si bien Canadá se ha comprometido a aumentar el gasto en defensa con el fin de seguir siendo un socio valioso de la OTAN, así como un actor internacional comprometido en tiempos de incertidumbre, el presupuesto de defensa canadiense también equilibra las responsabilidades al interno del país y en América del*

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<sup>2</sup> *The opinions of the author are his own, and do not necessarily reflect those of the IADC, the Canadian Government or the Canadian Armed Forces*

*Norte. Mientras que los países más grandes continuarán asumiendo la mayor parte de distribución de la carga, la unidad, el propósito y la resistencia de la OTAN superarán el compromiso en el gasto de defensa respecto al PIB de los países más pequeños*

**Keywords:** economic theory, alliances, free-riding, NATO, defence budget.

**Palabras claves:** teoría económica, alianzas, free-riding, OTAN, presupuesto de defensa.

### Introduction

The U.S. are keen in convincing NATO allies to spend at least 2% of national GDP on defence, as agreed upon in the 2014 NATO Wales Declaration.<sup>3</sup> Increased spending may be welcome to enhance NATO's posture towards Russia, as well as its numerous other challenges in Europe and its neighbourhood, however it is not necessarily an indicator of military capability or effectiveness.<sup>4</sup> It is revealing that, five years later, the only four NATO allies having recently reached the target are those where Russian threat is the most prevalent. It is difficult for other taxpayers to prioritize NATO, who provides such an abstract service as deterrence, over competing and perhaps more urgent priorities such as migration, trade or even climate change.

I will discuss three political economy of defence concepts linked to NATO defence spending and contextualize each of them with examples of Canada's contributions to NATO. While a defence entity, NATO provides a mix of pure and impure public goods in the contemporary environment. Regardless of the size of a member's national defence spending, only a portion of these expenses will benefit the alliance as a whole. The economic theory of alliances explains sub-optimal contributions by most of its members, most of the time. This dynamic will not change despite pressures from the U.S. for smaller countries to meet commitments. Reaching the NATO target is but one of the forces in a national budget process. Internal and external factors associated to budgetary functions will influence the national defence resource allocation process, and even more so in the post COVID-19 global economic

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<sup>3</sup> NATO, "The Wales Declaration on the Transatlantic Bond," NATO, accessed November 10, 2019, [http://www.nato.int/cps/en/natohq/official\\_texts\\_112985.htm](http://www.nato.int/cps/en/natohq/official_texts_112985.htm).

<sup>4</sup> Craig J. Stone, "Stone, J. Craig Growing the Defence Budget: What Would Two Percent of GDP Look Like?," Canadian Global Affairs Institute, accessed November 10, 2019, [https://www.cgai.ca/growing\\_the\\_defence\\_budget\\_what\\_would\\_two\\_percent\\_of\\_gdp\\_look\\_like](https://www.cgai.ca/growing_the_defence_budget_what_would_two_percent_of_gdp_look_like).

context. In summary, the 2% of GDP defence spending may be difficult to achieve for most, and actually mean less to military effectiveness of NATO than concrete resource contributions to operations and infrastructure, military cooperation and intelligence-sharing between partner states.

### **NATO, seldomly a provider of defence as pure public good**

Only a fraction of members' defence budgets will be of value to an alliance as a whole. The remainder pays for national commitments that may have nothing to do with the alliance, and that may even not be provided in a NATO Article 5 response. The theory of public goods stems in part from Paul Samuelson's analysis of collective consumption goods.<sup>5</sup> Pure public goods, in opposition to private goods, are non-rivalrous and non-excludable. The consumption of a benefit from one entity will not take anything away from others, thus non-rivalrous; and one cannot be excluded, or if so at great cost, thus non-excludable.<sup>6</sup> Most public goods are impure, either excludable and non-rivalrous (networks and clubs), or rivalrous and non-excludable (subject to congestion or depletion). While private good consumption dynamics can be managed optimally through market forces, the provision of public goods usually requires external intervention. Public goods are subject to supply problems resulting in sub-optimal allocation of resources, with rational actors behaving as free-riders, or in sub-optimal cooperation given potential prisoners' dilemmas.<sup>7</sup> National defence is without contest a pure public good, however when provided by alliances, it is not always the case.

During the height of the Cold War, NATO allies relied on U.S. nuclear capacity to deter the Soviet Union threat. All NATO members benefited from the same protection as the U.S.. In this sense, the security umbrella was non-rivalrous, and non-excludable, and as such a pure public good. Oneal and Diehl highlighted a 1967 shift of NATO strategy, from massive retaliation to flexible response, triggering NATO's pivot

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<sup>5</sup> Paul A. Samuelson, "The Pure Theory of Public Expenditure," *The Review of Economics and Statistics* 36, no. 4 (November 1954): 387–89, [https://www.ses.unam.mx/docencia/2007II/Lecturas/Mod3\\_Samuelson.pdf](https://www.ses.unam.mx/docencia/2007II/Lecturas/Mod3_Samuelson.pdf).

<sup>6</sup> Inge Kaul, Isabelle Grunberg, and Marc A. Stern, "Defining Global Public Goods," in *Global Public Goods: International Cooperation in the 21st Century* (New York: Oxford University Press, 1999), 3–5, [https://www.researchgate.net/profile/Eugenio\\_Bobenrieth/publication/46440722\\_The\\_Political\\_Economy\\_of\\_International\\_Environmental\\_Cooperation/links/55ddb07308ae79830bb531ed.pdf#page=488](https://www.researchgate.net/profile/Eugenio_Bobenrieth/publication/46440722_The_Political_Economy_of_International_Environmental_Cooperation/links/55ddb07308ae79830bb531ed.pdf#page=488).

<sup>7</sup> Kaul, Grunberg, and Stern, 6-8.

towards providing impure public goods. NATO's individual members became less driven by deterrence, and more focused on private disputes such as the conflict between Great-Britain and Argentina.<sup>8</sup> Defence resources used in the Falklands conflict, for example, did not benefit the NATO community as a whole.

It is clearer today that NATO is providing impure public goods. In an interview in 2019, French president Emmanuel Macron referred to the withdrawal of U.S. troops from Syria, and subsequent offensive actions by Turkey against Kurds, both uncoordinated with their NATO allies as “the brain-death of NATO”.<sup>9</sup> Macron's comments reflected an increasing divergence of defence interests between NATO allies. U.S. domestic security issues and global partnerships outside of NATO's sphere of interest may have only marginal benefits to NATO's defence agenda. The U.S. remains the provider of the most reliable Article 5 response capability, as the Pentagon was keen on demonstrating with Exercise Defender 2020.<sup>10</sup> This said, while U.S. Armed Forces value their partnership and alliance with NATO, not everything is shared with Europeans: intelligence-sharing among the 5-Eye community being a prime example. On the other hand, Europeans are not expected either to invest in American global endeavours that do not benefit their interests or those of the North Atlantic Alliance.

NATO supplies a mix of pure and impure public goods. Most public goods are now diluted into separate clubs, non-rivalrous but excludable, in which members invest where their priorities are. NATO Hub South and Mediterranean Dialogue address migration concerns of NATO's southern countries. Presence near Russia's borders offers reassurance to the Northern states, but much less to others. Insufficiency of resources increases rivalries and impacts the Alliance priorities. However, on the other

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<sup>8</sup> John R. Oneal and Paul F. Diehl, “The Theory of Collective Action and NATO Defense Burdens: New Empirical Tests.,” *Political Research Quarterly* 47, no. 2 (1994): 389–91, [https://www.jstor.org/stable/449016?read-now=1&refreqid=excelsior%3A3cdf4362dc7408de0a1e2c0225eac8a5&seq=4#page\\_scan\\_tab\\_contents](https://www.jstor.org/stable/449016?read-now=1&refreqid=excelsior%3A3cdf4362dc7408de0a1e2c0225eac8a5&seq=4#page_scan_tab_contents).

<sup>9</sup> Israel Vargas, “Macron's View of the World - Emmanuel Macron on Europe's Fragile Place in a Hostile World | Briefing | The Economist,” accessed November 28, 2019, <https://www.economist.com/briefing/2019/11/07/emmanuel-macron-on-europes-fragile-place-in-a-hostile-world>.

<sup>10</sup> AFP, “Yankees Go Home - America's Dry Run to Defend Europe Is Derailed by Covid-19 | Europe | The Economist,” accessed April 24, 2020, <https://www.economist.com/europe/2020/04/23/americas-dry-run-to-defend-europe-is-derailed-by-covid-19>.

hand, NATO has committed to the “four thirties plan”.<sup>11</sup> The availability of these resources will constitute a pure public good, as long as they are perceived as benefitting the Alliance as a whole. As such the plan is perhaps more relevant than a 2% defence spending target.

For its investment, Canada may not be getting the expected provision of defence as a pure public good from NATO.<sup>12</sup> While a smaller contributor in terms of percentage of GDP, Canada’s commitment is much higher in terms of opportunity cost. Instead of purchasing additional flexible light armoured vehicles for homeland challenges, or investing in Arctic defence capabilities, the government committed to NATO deployment capabilities such as Leopard II tanks, and deploying personnel in Norway, Poland and Latvia. NATO’s Article 5 insurance is important in Canada’s defence strategy<sup>13</sup>, but there may be very little of which NATO provides not already in supply in Canada’s bilateral defence relationship with the U.S., its participation in the 5-Eyes community, or in other coalitions of the willing such as the Global Coalition to defeat ISIS. Where Canada benefits however, is the stable and secure trans North-Atlantic environment, conducive to strong economic and political partnerships.

### **Intangibles of allied cooperation compensating sub-optimal contributions**

It is unlikely that smaller alliance members will provide optimal contributions to an alliance. Olson and Zeckhauser proposed a model of defence burden that predicts larger countries will pay a disproportionate amount within an alliance, while smaller countries will pay little, if at all.<sup>14</sup> Smaller countries are consistently requested by the largest to pay more, however the authors contend that these demands will achieve nothing more than create division and resentment. A disproportionate effort from smaller countries would have negative internal social and economic repercussions with negligible effect on the alliance’s defence capabilities. Even a sub-optimal contribution

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<sup>11</sup> NATO, “NATO Defence Ministers Conclude Two Days of Discussions in Brussels,” NATO, accessed December 6, 2019, [http://www.nato.int/cps/en/natohq/news\\_163733.htm](http://www.nato.int/cps/en/natohq/news_163733.htm).

<sup>12</sup> Ariel Shapiro, “NATO If Necessary, But Not Necessarily NATO: Critically Evaluating Canada’s Membership in the North Atlantic Treaty Organization,” Canadian Global Affairs Institute, October 2017, [https://www.cgai.ca/nato\\_if\\_necessary\\_but\\_not\\_necessarily\\_nato](https://www.cgai.ca/nato_if_necessary_but_not_necessarily_nato).

<sup>13</sup> National Defence, “Strong, Secure, Engaged: Canada’s Defence Policy,” policies, aem, September 22, 2017, <https://www.canada.ca/en/departement-national-defence/corporate/policies-standards/canada-defence-policy.html>.

<sup>14</sup> Mancur Olson and Richard Zeckhauser, “An Economic Theory of Alliances,” Memorandum RM-4297-ISA (Rand Corp., 1966).

advantages the alliance. The fact that NATO's 30 countries meet democratic standards contributes to regional stability and deterrence, de facto counterbalances illiberalism in Europe, and reduces risks of another Crimea.

Jack Hirshleifer added to the theory of public goods, and to the theory of alliances, by proposing three effects of asymmetry in providing resources for a public good.<sup>15</sup> The first effect is summation function, by which results achieved are the sum of the efforts of each member. This function will usually provide a strong outcome, however with under-provision of resources that will increase with the number of members. This is applicable to individual active NATO operations, where member participation is distributed among troop contributing nations. The second effect is the “best shot function”, meaning that results will depend on the strongest. While this may deliver the best outcome, under-provision of resources by the strongest will seriously affect results. A NATO example would be the beginning phases of an Article 5 response where the U.S., Great-Britain and France would be called upon to provide the bulk of the forces. The third possible effect is that of “weakest link function”, where the strength of the alliance relies on the resilience of weakest one. While the outcome is the least desirable of the three functions, under-provision of resources by and to the weakest link will have more limited effects. An example of the weakest link function is the fragility of Turkey as a NATO member. Turkey, a participating member of the F35 program, had also purchased the Russian S-400 missile defence shield, which prompted concerns that Russia could access valuable information on NATO's F35 systems.

Sandler and Hartley nuanced the theory of public goods by including intangibles of allied cooperation.<sup>16</sup> Impacts of cooperation can include political trade-offs, efficiency gains and economies of scale through technical cooperation and standardization, as well as use of comparative advantages, in defence and defence industry. Examples of cooperation abound in NATO, one being the F35 program, with provision of parts and contracts to buy the aircraft shared by 8 NATO partners. The obvious advantages for implicated defence industries are the reduction of monopsony,

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<sup>15</sup> Jack Hirshleifer, “From Weakest-Link to Best-Shot: The Voluntary Provision of Public Goods,” *Public Choice* 41, no. 3 (1983): 371–86, <http://econ.ucsb.edu/~deacon/Econ210CPublic/papers/HirshleiferBestShot.pdf>.

<sup>16</sup> Todd Sandler and Keith Hartley, “Economics of Alliances: The Lessons for Collective Action,” *Journal of Economic Literature* XXXIX (September 2001): 887–88.

while governments still benefit from economy of scale and efficiency gains, better interoperability, as well as smaller country access to advanced technology. NATO is increasingly involved in Iraq stabilization phase. Given a U.S. eventual drawdown from Iraq, discussions in Brussels prompted the swift creation of NATO Training Mission in Iraq (NTM-I). While a worthwhile addition to the counter-violent extremist fight, the mission also aims to lower long term costs in Iraq for U.S., and NATO presence in the region could counter-balance that of Russia in Syria. NTM-I is commanded by a Canadian, and resources are mainly provided by smaller members. A fully manned NTM-I is an example of an efficient Hirshleifer's summation function. It also exemplifies a smaller nation increase of contribution to NATO, independent of reaching 2% of GDP for defence spending.

The degree to which a country is providing sub-optimal contributions to an alliance, cannot be calculated based upon percentage of GDP spending on defence. Every nation has its own national interests and engagements, which is a driver of defence spending. In the contemporary environment, while the U.S. has unmatched global interests and engagements for which Americans spend 3.2% of their GDP (2018) to sustain, Nordic NATO countries are more focused on threats at their Eastern borders, and Southern Europeans are concerned with and the Mediterranean and North Africa. Their respective investments, resources and technologies will reflect these interests and engagements. The fact that they spend less is at least in part attributable to the fact that they have a narrower focus than the U.S., not only because they are relying on NATO. Plümper and Neumayer hypothesize that defence spending growth is a more accurate predictor of free-riding. Assuming that national interests remain relatively constant, free-rider defence spending growth would tend to be proportionally less than that of the main defence provider. The authors, using this method, concluded that most countries within NATO were free-riding on the U.S. during the period they studied (1956-1988), the medium-sized countries no less than the small ones.<sup>17</sup> This methodology has merits, if on aggregate, all of the countries follow the same economic cycle and face similar threats.

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<sup>17</sup> Thomas Plümper and Eric Neumayer, "Free-Riding in Alliances: Testing an Old Theory with a New Method," *Conflict Management and Peace Science* 32, no. 3 (2015): 247–68, [www.jstor.org/stable/26271388](http://www.jstor.org/stable/26271388).

### Two percent of GDP defence spending target, a challenging national budgeting problem

Reaching an alliance target is but one of the pressures in a national budget process. For Marcel, Guzmán and Sanginés, budgets play an institutional, economic and managerial role.<sup>18</sup> In the budget development process, various stakeholders represent competing interests and obligations. The more stakeholders there are, the more difficult it is to reach an agreement.<sup>19</sup> While a defence minister can agree to work towards a target of defence spending at 2% of GDP as a contribution to NATO, this is but a single pressure point in the national budget's institutional role, that can very well conflict with others, to include other political agreements, partisan programs and priorities, democratic popular support (or lack thereof) to an increased defence budget.

The institutional role needs to be balanced with the economic role. If defence budgets are typically higher when threats are higher, the contrary is also true.<sup>20</sup> In the early nineties post-Cold War context, several of the major global military spenders, to include France, Germany and Great Britain, decided to use other instruments to stimulate their economies, and chose to significantly reduce their respective military budgets.<sup>21</sup> Germany went from 2.65% of GDP to 1.4% in less than 10 years. While the U.S. also decreased spending in the same period, threat after 9/11 brought the budget back up, which we did not see in Europe.

In the context of an economic crisis, it should not be surprising that defence budgets will be affected. The global economic downturn of 2008 had immediate and lasting effects on defence spending in Europe, to include industry and innovation, and an even deeper impact on capabilities.<sup>22</sup> Some of the smaller European countries had cut

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<sup>18</sup> Mario Marcel, Marcela Guzmán, and Mario Sanginés, *Presupuesto Para El Desarrollo En América Latina* (Washington, DC: Banco Interamericano de Desarrollo, 2013), <http://www20.iadb.org/intal/catalogo/PE/2014/13760.pdf>.

<sup>19</sup> Marcel, Guzmán, and Sanginés, 4.

<sup>20</sup> Todd Harrison and Seamus Daniels, *Analysis of the FY 2018 Defense Budget* (Washington, DC: Center for Strategic and International Studies, 2017).

<sup>21</sup> Patrick Keller, "Challenges for the Defense Budget after the Economic Crisis. A European View" (Conference of Forte de Copacabana International Security: A European–South American Dialogue, Rio de Janeiro: Konrad-Adenauer-Stiftung, 2011), 111–21.

<sup>22</sup> Christian Mölling, Sophia Becker, and Torben Schütz, "Deterrence and Defense in Times of COVID-19: Europe's Political Choices," Policy Brief (Berlin: DGAP German Council on Foreign Relations, April 2020), [https://dgap.org/sites/default/files/article\\_pdfs/dgap-policybrief-2020-09-en.pdf](https://dgap.org/sites/default/files/article_pdfs/dgap-policybrief-2020-09-en.pdf).



their budgets up to 30%, while the larger countries cut between 8 and 15% of defence spending. The economic role will be at the forefront of the impending economic crisis resulting from the aftermath of COVID-19. The pressure on defence spending will be much worse, as losses in GDP for most affected countries could be two to four times higher than losses experienced during the 2008 economic crisis.

Voters in Western democracies will be confronted to the Arrows impossibility theorem. Multiple choices between economic and social stimuli, reductions in defence versus threats, and preparedness for the next crisis will all be difficult to aggregate to attain a satisfactory and fair outcome for the majority. Most likely, most individual nations will be under political pressure to reduce their defence budget, which in turn would have long-lasting impacts on NATO's capabilities. This would mean suspension of innovation, reduction of personnel, delaying acquisition, reducing engagements and exercises, all in an increasingly dangerous threat environment. Unlike in 2008, less democratic actors, such as Russia and China are ready to step into a security vacuum. Transnational violent extremist organizations are more likely and capable today to exploit any gaps and seams than they were in 2008.

The third role that needs to be balanced is the managerial role. Defence budgeting requires highly institutionalized technical procedures throughout the process, to include programming and elaboration, during the execution of the budget as well as during control and verification.<sup>23</sup> This requires a multiplicity of experts and advisors across ministries to ensure compliance with norms and to harmonize resources and operations with efficiency. The managerial role implies compliance to finance laws, personnel caps, and needs to consider the accomplishment of assigned objectives.

Canada recently announced a plan to increase the defence budget to align it with the new defence policy,<sup>24</sup> from 18.9 billion (2016/17) to 32.7 billion in a span of 10 years, to meet international commitments and challenges.<sup>25</sup> This was a departure from prior strategies following a costly Afghan campaign, in order to contain Canada's

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<sup>23</sup> Marcel, Guzmán, and Sanginés, 21.

<sup>24</sup> Defence, "Strong, Secure, Engaged."

<sup>25</sup> Chrystia Freeland, "Address by Minister Freeland on Canada's Foreign Policy Priorities" (Speech, Ottawa, June 6, 2017), [https://www.canada.ca/en/global-affairs/news/2017/06/address\\_by\\_ministerfreelandoncanadasforeignpolicypriorities.html](https://www.canada.ca/en/global-affairs/news/2017/06/address_by_ministerfreelandoncanadasforeignpolicypriorities.html).

external debt. It is noteworthy that the 70% increase in budget is a step, not a commitment to meet the 2% target, as it does not account for GDP growth.

Speaking to the new defence budget's institutional role, Global Affairs Canada Minister, Chrystia Freeland outlined several reasons for the increase, Canada's multilateral commitments, to include NATO, being only one. She also highlighted the requirement to modernize the military, subjected to severe budget cuts over the recent years, to be a relevant global actor for peace and security, and to promote Canada's values.<sup>26</sup>

Canada's defence investment plan also highlights the economic role of the defence budget. Jody Foster and General Vance underline the importance of the ties between National Defence and Canada's defence and technology industry and the effort to promote employment and economic growth.<sup>27</sup> Canada's Treasury Board reviews major acquisitions to ensure they meet national and regional development and economic objectives, to include environment and First Nations.

Consistent with the budget's managerial role, within the Canadian government, defence acquisitions are subject to the Financial Administration Act, and depend on interministerial cooperation and separation of responsibilities between Minister of Defence, Public Services and Procurement Canada, Treasury Board of Canada, and Innovation, Science and Development Canada. Military experts are only a component of the process, which over the years has become much more dependent on cooperative networks to achieve some flexibility to meet operational needs.<sup>28</sup>

### Conclusion

Moving forward, a nuanced approach from all allies is required. A better balance between private marginal cost and social marginal benefit may not be the result of smaller countries investing 2% of their GDP in their national defence, but rather from concrete long-standing contributions such as the "four thirties plan". NATO's missions are more diverse than during the Cold War, and as such offers a more impure public good. Larger nation pressure would be better applied in addressing suboptimal

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<sup>26</sup> Freeland.

<sup>27</sup> "Defence Investment Plan 2018 - Annual Update 2019," n.d., 18.

<sup>28</sup> Charles Davies, "Comprendre Le Processus d'acquisition de La Défense," *Revue Militaire Canadienne* 15, no. 2 (2015): 5–15, <http://www.journal.forces.gc.ca/vol15/no2/PDF/CMJ152Fp5.pdf>.

participation in NATO missions, while ensuring it maintains capacity and will to act as the main provider when Article 5 is invoked. Acknowledging the reality of the effects of an economic crisis on national defence spending, leading nations within NATO need to ensure continuity of investment in defence industry, research and innovation, to fully commit, cooperate and contribute troops and equipment to ongoing commitments and preparing for future crises, now more than ever in a post COVID-19 threat environment. In the upcoming months and years, NATO will be facing its toughest test yet. NATO and other alliances will continue to be led by major powers with sub-optimal participation from others. Participation need not to be determined by the amount a nation spends on its own defence, but on the resources brought to the table, maintaining unity, purpose and resilience to adapt to a world that has already changed.

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