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Hard Borders, Soft States: Ghana's Security Dilemma and the Concept of 'Permeable Protection' in the Sahelian Spillover Era

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ABSTRACT

Hard Borders, Soft States: Ghana's Security Dilemma and the Concept of 'Permeable ProteaGhana's proximity to insurgency in Burkina Faso raises a puzzle: why do formal commitments to territorial security coexist with reports of cross-border militant logistics and comparatively limited large-scale attacks on Ghanaian targets? This article proposes "permeable protection" as an analytical lens, not an established Ghanaian doctrine for examining that tension. It combines a structured comparison of official policy, independent field research and the Ghanaian government's response to allegations of tacit accommodation with a reproducible, exploratory analysis of World Bank annual military, health and education expenditure shares for 2010–2022 (13 observations). Clingendael's 2024 report identified 40 suspected extremist-linked activity records since 2015, including 28 since 2022; however, the report's underlying event file is not public, and the records do not constitute independently reconstructed annual attack totals. The original manuscript's kidnapping and arrest series were therefore withdrawn. Reconstructed fiscal regressions do not support the earlier claim that military expenditure displaced social spending: military and health expenditure shares were essentially uncorrelated (r = .059; p = .849), while the education association was positive (r = .618; conventional p = .024) and not robust to HC3 standard errors (p = .075). The findings support careful differentiation between documented border threats, contested claims about state intent and non-causal budget associations. Policy implications emphasise transparent security governance, community engagement and stronger fiscal data rather than presuming a deliberate non-aggression strategy.ction' in the Sahelian Spillover Era

KEYWORDS: *Ghana; Sahel; border security; permeable protection; state capacity; social expenditure.*

How to Cite

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1. Introduction

Ghana occupies an exposed position on the southern edge of the Sahelian conflict environment. In 2023, attacks in Burkina Faso intensified and violence extended into southern areas adjoining coastal states, including Ghana (U.S. Department of State, 2024). Ghana's Ministry of National Security (2020) identifies organised crime, trafficking, violent extremism and governance deficiencies as relevant to national security. Yet formal recognition of a threat does not establish either comprehensive territorial control or the policy intention behind day-to-day border enforcement.

The phrase "hard borders, soft states" signals an institutional contradiction rather than a claim that Ghana possesses no effective government. The state has recognised security, immigration and counterterrorism responsibilities, but policing a frontier is not equivalent to sealing it. Formal control involves law, designated crossing points, surveillance and the credible capacity to intervene. Actual movement depends additionally on terrain, informal routes, local consent, intelligence, available personnel and the incentives of both legitimate travellers and armed groups. A credible account of Ghana's dilemma must therefore explain why these dimensions may diverge rather than use the visibility of cross-border activity as automatic proof of

either policy failure or calculated tolerance.

The problem has a regional as well as a domestic dimension. Ghana shares its northern frontier with Burkina Faso, where insurgent violence has altered the strategic environment of neighbouring coastal countries. The 2022 Promediation and Konrad-Adenauer-Stiftung assessment described northern Ghana and Togo as exposed to pressures generated by conflict farther north. Unlike a conventional border conflict, the potential spillover includes the movement of people seeking protection, small-scale commercial exchange and allegations of clandestine logistical use. These are analytically different processes: refugee protection is an obligation and a humanitarian task, whereas organised armed activity constitutes a potential security risk (Promediation, 2022; United Nations High Commissioner for Refugees [UNHCR], 2025).

This distinction matters because a border can remain socially and economically connected while the state attempts to control illicit and violent movement. Ghanaian border-security institutions have adopted preventive tactics and inter-agency cooperation, as documented in interviews with security personnel by Prah and Chanimbe (2021). At the same time, a July 2024 Clingendael field-research report described suspected extremist logistical activity and discussed possible tacit accommodation (de Bruijne et al., 2024). Reuters subsequently reported similar allegations from named and unnamed sources; Ghana's Ministry of National Security publicly rejected the suggestion that it had a non-aggression policy or tacit arrangement with militants (Lewis & Adombila, 2024; Reuters, 2024). The allegation and denial are observations about the public evidence record, not proof of either position.

A contemporaneous policy record also requires care. The Ministry of the Interior's description of the Ghana Immigration Service's 2023–2029 strategic plan explicitly identifies border management, transnational crime prevention, enforcement and organisational capacity as priorities (Ministry of the Interior, 2023). This shows a declared intention to strengthen control; it cannot show the actual frequency of interceptions or establish why any reported movement was not interdicted. Comparing policy commitments with observations is more defensible than treating a plan as an outcome measure. It also makes the article's question sharper: can differences between official intentions and observed circumstances be explained by resource limits and social conditions without assuming an undisclosed policy of accommodation?

The first analytical problem is therefore one of inference: what can be concluded from uneven border practices and competing accounts of why those practices arise? The second concerns financing. The earlier submitted version asserted that additional defence expenditure caused a reduction in health and education budgets. Such a proposition requires a transparent dataset and a credible identification strategy. National spending shares alone may show co-movement, but they do not reveal the origins or destination of marginal budget resources.

1.1 Objectives and research questions

The article has two objectives: (1) to assess how official security commitments, documented regional threats and conflicting accounts of cross-border activity illuminate Ghana's border-governance dilemma; and (2) to describe the relationship between national military expenditure and public health and education expenditure shares, without inferring causal displacement. The corresponding questions are: How far does the proposed lens of "permeable protection" clarify Ghana's reported border-security practices without assuming deliberate accommodation? What fiscal associations appear in the published Ghana annual series for 2010–2022, and how sensitive are they to modest robustness checks?

2. Literature and conceptual framework

2.1 Border threats, enforcement and community relationships

The cross-border spread of violent extremism places pressure on both coercive institutions and civilian governance. Promediation's fieldwork-informed analysis, published with the Konrad-Adenauer-Stiftung (2022), situates northern Ghana and Togo within a changing regional risk environment while drawing attention to different degrees of exposure and state response. The deterioration in Burkina Faso's southern regions in 2023 provides a contextual mechanism for heightened concern on Ghana's northern frontier (U.S. Department of State, 2024). However, an external threat indicator is not equivalent to a measured rise in incidents inside Ghana.

Border porosity has at least three meanings that are often blurred in policy debates. First, it may describe a geographical condition in which numerous unofficial routes make universal monitoring costly. Secondly, it can identify an administrative condition in which institutions possess legal authority but experience staffing, information or coordination limitations. Thirdly, it can refer to socially embedded mobility that predates contemporary borders and includes familial, pastoral and trading networks. Only the first two necessarily imply enforcement problems, and none by itself establishes complicity in militant activity.

Treating legitimate movement as evidence of insurgent infiltration risks converting an imprecise geographical description into an accusation against border populations.

The distinction matters for evaluating state capacity. A functioning checkpoint can record travellers who use that crossing while missing movements along other routes; an increase in detections can reflect better monitoring rather than more unlawful traffic. Similarly, a government can adopt sophisticated formal plans while struggling to staff remote districts. These possibilities are not excuses for poor enforcement; they are competing causal interpretations that must be assessed against administrative and local evidence. The article therefore treats hardening as an observable institutional commitment rather than a claim of perfect closure (Ministry of National Security, 2020; Ministry of the Interior, 2023).

Institutional preparedness is neither uniform nor reducible to border closure. Prah and Chanimbe (2021) conducted interviews with 12 security personnel and documented preventive surveillance, intelligence practices, training and inter-agency cooperation. Their evidence supports the existence of active institutional responses but cannot establish that every border crossing is detected or that any limited enforcement is deliberate. Research on community engagement likewise suggests that local knowledge and trust may matter to early warning; Pul (2023) warns against treating communities merely as passive surveillance resources. Merdiemah and Danso (2025) identify governance deficits and implementation challenges through stakeholder research. Both perspectives caution against an exclusively militarised interpretation of security resilience.

The regional chronology also requires precision. The 2022 Promediation study raised concerns about jihadist expansion towards Ghana and Togo, but did not supply a complete, standardised annual dataset of extremist attacks within Ghana. Later country reporting records worsening insecurity in Burkina Faso, while independent field researchers examined possible forms of extremist-linked activity on the Ghanaian side of the border (Promediation, 2022; U.S. Department of State, 2024; de Bruijne et al., 2024). These sources complement one another, but they answer different questions. A report of violence in Burkina Faso measures the threat environment; a suspected logistics episode in Ghana measures potential exposure; and a confirmed attack on a Ghanaian target would measure a distinct outcome.

Humanitarian displacement creates additional governance demands that should not be collapsed into counterterrorism statistics. UNHCR's Ghana operation describes reception and settlement support for people arriving from Burkina Faso. Its December 2024 country profile records approximately 17,300 registered refugees and asylum-seekers nationwide, drawn from several countries not simply extremist-linked cross-border travellers (UNHCR, n.d.). These figures belong to a later reporting period than the 2010–2022 fiscal regressions. They inform the broader policy setting, but are not independent observations in the fiscal models and cannot be used to explain the earlier coefficients retrospectively.

Community-level evidence adds another corrective. Adofo's (2024) qualitative research centred on Hamile, Paga and Tumu explicitly examined the relationship between counterterrorism practices and human-rights concerns. It demonstrates the relevance of civilian experiences to any assessment of an effective border. An enforcement strategy that disregards rights and livelihoods may erode cooperation even if it increases the visible presence of armed personnel. Equally, the evidence from a small number of interview locations cannot automatically be generalised across all Ghanaian frontier districts.

2.2 The proposed “permeable protection” lens

“Permeable protection” is defined here as a provisional analytical configuration in which a state retains formal commitments to territorial security while effective border control, patterns of lawful movement and reported informal practices remain uneven, contested or selectively implemented. Unlike “porosity”, which describes the ease with which people and goods cross a border, the proposed term asks how stated security goals relate to observed or reported implementation. Unlike “selective enforcement”, it does not presume that unequal enforcement is a purposeful decision. Unlike a “weak state” explanation, it does not presume that every gap derives from institutional incapacity.

The proposed concept should be evaluated against existing explanations, not treated as a novel name for known porosity. A useful analytical formulation contains four observable dimensions: the public strength of territorial commitments; the distribution of actual enforcement capability; the documented pattern of lawful and suspected illicit cross-border movement; and the government's reasons for variation in enforcement, where direct evidence exists. The first three can, in principle, be assessed through published law, deployment records and event-level evidence. The fourth requires correspondence, operational instructions, authorised testimony or well-corroborated interviews. Without that final evidentiary layer, the concept describes an apparent configuration rather than a deliberately chosen doctrine.

A key test is whether the concept adds explanatory value. If selective non-intervention is wholly explained by absent personnel, it adds little beyond constrained capacity. If crossings are permitted under known

legal and humanitarian rules, the finding is regulatory differentiation, not accommodation of insurgency. A distinct interpretation becomes more plausible only if credible evidence shows a recurring combination of strict official rhetoric, effective ability to intervene, and knowingly tolerated suspect activity motivated by escalation concerns. The documentary record reviewed here does not meet that threshold. Explicitly setting a high threshold makes the conceptual contribution more falsifiable and less dependent on retrospective storytelling.

Three mechanisms must be treated as rivals rather than assumed equivalents. A capacity mechanism attributes variation to staffing, resources, terrain or information gaps. A social-embeddedness mechanism highlights legitimate commercial, kinship and livelihood ties that complicate indiscriminate closure. An intentional-accommodation mechanism would require direct, corroborated policy or operational evidence that particular actors were knowingly permitted to operate. Existing public material can support concern about the first two mechanisms and records contested allegations concerning the third; it is insufficient to establish a coherent government doctrine. The label is thus most useful as a question-generating heuristic with falsifiable implications, not as an already demonstrated causal theory.

Competing scholarship offers a fourth possibility: Ghana's relative avoidance of large-scale attacks may reflect social and political conditions that raise the organisational costs of domestic extremist mobilisation. Ibrahim and Gariba (2024) argue that characteristics of Ghana's socio-political formation are important to explaining resilience and should not be overshadowed by accounts focused solely on counterterrorism operations. Their argument differs from a tacit-accommodation account because it locates possible resilience partly in social relations and the incentives confronting armed organisations, not only in bargains among security actors. These explanations are not mutually exclusive, but none can be confidently ranked using the evidence assembled for this article.

The distinction also limits the language of “state softness”. The absence of a spectacular attack could be compatible with deterrence, organisational restraint, selective targeting, informal negotiation or incomplete observation. It cannot identify the relevant mechanism on its own. A comparative design involving neighbouring states and direct operational evidence could eventually evaluate those possibilities, but the present article is a Ghana-centred conceptual and descriptive inquiry rather than a causal comparison of national counterterrorism effectiveness.

2.3 Fiscal allocation and the research gap

The social opportunity cost of security spending is a legitimate policy question, particularly where states also confront educational, health and livelihood needs. Nevertheless, fiscal substitution is not established when different spending categories, each expressed as a percentage of gross domestic product (GDP), show an inverse association. Such movements can reflect changes in GDP, inflation, macroeconomic shocks, revenues, fiscal rules or composition effects. Moreover, the World Bank’s military-expenditure series is a national indicator; it does not identify expenditure specifically directed to frontier policing or preventive counterterrorism.

The fiscal question requires particular attention to units. Military expenditure, domestic public health expenditure and education expenditure are reported here as separate shares of GDP, not as mutually exclusive components of a fixed public budget. Even when two GDP shares move in opposite directions, this need not mean funds were transferred between ministries. The denominator can change, national revenues can fluctuate, foreign support can be earmarked and recorded military expenditure may not capture immigration, intelligence or local preventive programmes. Conversely, health and education figures can reflect financing and classification practices different from military accounts. A clean interpretation must name the indicators and restrict each statistical statement to them.

Time also matters. Ghana's WDI military share was approximately 0.283% of GDP in 2010, reached 0.593% in 2012, and stood at 0.336% in 2022. There is no monotonic rise across those endpoints. Over the same common period, the education share moved from approximately 5.541% to 2.910%, but that downward change cannot be attributed to the military series without stronger evidence. The health share moved from approximately 2.260% to 2.037%. The differing patterns illustrate why year-by-year descriptive comparison and robustness checks are preferable to assuming a straightforward security-versus-welfare trade-off before fitting the model (World Bank, 2026).

The contribution of this study is therefore twofold but limited: it proposes a clearly bounded interpretive vocabulary for evaluating competing claims about Ghana’s border posture, and it independently checks whether the previously alleged negative security–social-spending relationship is visible in an openly reproducible annual series. It does not measure the effect of a Ghanaian security doctrine on attack incidence or establish the causal effects of military expenditure on sectoral budgets.

3. Methodology

3.1 Research design and documentary evidence

The study adopts a secondary-source case-study design that combines structured documentary comparison with exploratory quantitative fiscal analysis. The documentary component is interpretive rather than a newly collected interview study. Publicly accessible sources were selected because they directly address (i) Ghana's formal security objectives, (ii) border-management and extremist-linked activity, or (iii) official and independent explanations of that activity. The core materials are the National Security Strategy (Ministry of National Security, 2020), the 2022 Promediation assessment, the 2024 Clingendael report, the October 2024 Reuters investigation and the Ghanaian ministry's October 2024 rebuttal, supported by peer-reviewed scholarship and a regional threat assessment. The documentary window covers policies from 2020 and publicly reported border developments principally up to 2024; the fiscal sample covers 2010–2022. These distinct observation windows are intentional and are not merged into a single security-fiscal panel.

Documentary selection was purposive and transparent rather than a systematic review of all West African security writing. The core set includes an official strategy, an official description of immigration priorities, field-research reports, a journal study of security preparedness, a journal analysis of Ghanaian resilience, investigative reporting and a published government rebuttal. Sources were retained when their institutional provenance, publication date and substantive relevance to Ghana could be identified. Contextual humanitarian material was included to avoid equating all frontier movement with security threats. Generic webpages, unattributed statistics and material lacking an identifiable publication were not used to construct outcomes.

For comparison, documents were read against four questions: What action, incident or commitment is asserted? Does the source report a firsthand observation, an institutional position or an allegation? Is a timeframe and location supplied? What competing explanation or contrary account exists? Findings were organised as official commitments, independent research findings, reported allegations and official contestation. The categories are not an artificial hierarchy in which officials always trump investigators: they indicate the kind of inference each item can sustain. The process is documentary synthesis, not a newly coded interview dataset; the researcher has not claimed access to confidential border directives or primary interview transcripts.

The review covers policy and threat reports published mainly between 2020 and 2025; Clingendael's reported suspected-activity records reach back to 2015. These overlapping but different dates must not be harmonised into a fictitious single Ghana incident panel. The country-level fiscal series is analysed separately over the available common annual window, 2010–2022.

For each document, the analysis recorded publisher, publication date, genre, territorial coverage, data provenance, whether the claim originated from an identified observation or anonymous testimony, and whether another primary source contested it. Material was compared under four codes: formal enforcement commitment; reported cross-border activity; attributed explanation of border practice; and acknowledgement of evidentiary uncertainty. Statements about motive were not elevated from source allegations to established state policy. This is a transparent analytic comparison of published material, not a systematic search of all available security documents; publication and source-selection bias remain possible.

3.2 Security-event reporting: inclusion and exclusion rules

The initial submission presented annual counts for kidnappings, armed attacks, alleged militant arrests and security-force casualties for 2018–2023. These series have been removed because event identifiers, geographical filters, definitions, source-to-record links and a reproducible extraction file were not available. The manuscript therefore makes no original statistical claim about national or northern-border incident trends, and does not compute correlations or significance tests from these counts. A "reported suspected extremist-linked activity record" in this revision means an incident categorised as suspected extremist-related by the cited Clingendael study; it is not synonymous with a terrorist attack, arrest, kidnapping or confirmed militant activity. No zero is inferred when a source does not report an event.

The withdrawal of the original table is substantive, not a presentation change. It labelled counts as "kidnappings", "militants arrested" and "police/military casualties" without incident IDs or a replicable rationale for linking ordinary crimes to extremist activity. Its all-zero armed-attack column could also be misleading if the analyst had searched only a narrow subset of event types or interpreted unreported cases as zeros. Those counts cannot be recovered by taking percentages from other researchers' summaries or by assuming that ACLED reports every relevant occurrence.

ACLED's published codebook distinguishes battles, explosions or remote violence, violence against civilians, protests, riots and strategic developments. Its strategically significant arrest category and certain other non-violent developments are context-dependent and are not coded as a complete census of all such events (ACLED, 2024). A future event-level replication would need a dated data snapshot, the event identifier, actor fields, relevant event and subevent types, geographic filters, treatment of uncertain perpetrator identity and explicit deduplication across other reports. It should state whether the target series concerns all reported kidnappings, conflict-linked abductions, suspected extremist logistics or violence against Ghanaian targets. Each represents a different estimand.

Consequently, the 40 suspected-activity records from Clingendael are used only as a sourced aggregate. Their “since 2015” and “since 2022” periods overlap, so they cannot be added, treated as independent totals or converted into annual growth rates. Without the underlying observations, neither an annual Kendall trend statistic nor a claim about a 900% increase can be defended.

De Bruijne et al. (2024) combined ACLED information, the institute’s monitoring and documented grey-literature reports, identifying 40 distinct suspected extremist-linked activity records in Ghana since 2015, including 28 since 2022. They reported only two violent incidents in Karaga (2017 and 2018); the remaining recorded activity was predominantly non-violent and included movements, procurement, rest or recruitment. The full underlying dataset was not publicly released. These are findings reproduced from that published study not incident counts re-coded or independently confirmed by this article. They cannot be disaggregated reliably into a year-by-year series without source access.

3.3 Fiscal data, variables and statistical specification

The quantitative strand uses the World Bank World Development Indicators (WDI) API (World Bank, 2026), extracted for Ghana on 15 October 2026 (API last updated 8 October 2026). Three measures are used: military expenditure as a percentage of GDP (MS.MIL.XPND.GD.ZS), domestic general government health expenditure as a percentage of GDP (SH.XPD.GHED.GD.ZS), and government expenditure on education as a percentage of GDP (SE.XPD.TOTL.GD.ZS). The education value for 2023 was absent in the retrieved dataset. Hence, the common complete-case sample is 2010–2022, with 13 annual observations and no interpolation, substitution or imputation. Each observation is matched by calendar year. World Bank metadata and data-revision dates should be retained with the replication file.

Data provenance was maintained at the indicator rather than the broad institutional level. The World Bank API was queried separately for each Ghana series and calendar years were merged by the year field. The dataset and replication code distributed with the revision contain the unrounded retrieved values; tables round only for readability. The 2023 education value was missing at extraction and was not treated as zero or interpolated. Limiting all three outcomes to complete common years avoids a misleading comparison of regressions estimated on different samples. The fiscal window is broader and partly earlier than the main 2022–2024 documentary security evidence; this design assesses broad fiscal co-movement, not fiscal effects of the reported recent incidents.

Sensitivity checks use first differences to reduce some shared-level trending and add GDP growth and consumer price inflation in an exploratory adjusted model. These supplementary checks do not constitute a credible policy intervention study. With only thirteen complete annual observations, including several predictors rapidly consumes degrees of freedom. Conventional OLS confidence intervals are shown alongside heteroskedasticity-consistent HC3 p values, while Durbin–Watson statistics flag possible serial dependence. None of these adjustments fully corrects endogenous budget decisions, measurement error or the possibility of common shocks to all expenditure shares.

For outcome Y (health or education expenditure, percentage points of GDP), the descriptive ordinary least-squares specification is $Y_t = \alpha + \beta M_t + \varepsilon_t$, where M_t denotes military expenditure (% of GDP) in year t. Pearson correlations and conventional two-sided OLS tests are reported together with 95% confidence intervals and HC3 heteroskedasticity-robust p values. First-difference regressions and alternative estimation windows are used as sensitivity checks. GDP growth and inflation are explored as descriptive covariates, but the sample is too small for strong multivariable inference. Serial correlation, shared time trends, GDP denominators and reverse or simultaneous fiscal allocation preclude causal interpretation. A significance threshold of .05 is descriptive only and is not used to infer an expenditure mechanism.

3.4 Ethics and limitations

The article uses publicly available documents and aggregate country-level indicators and involves no direct recruitment of human participants. Ethical care nevertheless requires that claims of extremist affiliation, state collusion or intentional tolerance are attributed, contested allegations are acknowledged and the absence of events in a source is not conflated with evidence that events did not occur. Key limits are

unpublished underlying security-event records, disputed interpretations of official intent, national expenditure aggregates rather than security-programme budgets, annual fiscal coverage of only 13 observations and possible changes to WDI historical estimates.

4. Results

4.1 Border-security evidence: documented, reported and disputed

Table 1 distinguishes what the published evidence establishes from what remains an inference. It replaces the unverifiable incident-by-year table in the initial submission.

The evidence chain provides no basis for conflating "presence", "attack" and "agreement". The Clingendael reported tally refers to suspected extremist-linked activities, most of which were not violent in the source's classification. Their existence does not imply that Ghana suffered 40 attacks, that exactly 40 militants entered the country or that Ghanaian agencies knowingly authorised those movements. Reuters' investigation reports what several security and diplomatic sources alleged; the subsequent government response disputes the inference of a tacit arrangement. The contradiction is analytically useful because it exposes uncertainty about intent, but a disagreement among sources is not itself confirmation of the most controversial claim.

The 2023–2029 Ghana Immigration Service plan adds an institutional observation that helps interpret this evidence: border management and transnational crime prevention were identified as explicit strategic priorities (Ministry of the Interior, 2023). Similarly, UNHCR reporting demonstrates why security policy must operate alongside reception and protection duties. Those records extend the meaning of the border-governance problem beyond the false choice of either sealing the frontier or permitting unfettered movement. The central result is therefore a documented mismatch between formal priorities, reported risks and incomplete knowledge of operational practice, not an estimated degree of intentional tolerance.

Table 1. Documentary evidence on Ghana's border-security posture and alleged accommodation

Source / period	Relevant finding	Evidentiary status and limitation
Ministry of National Security (2020)	National strategy identifies domestic and regional security risks and supports adaptive institutional responses.	Official policy statement; does not describe a non-aggression agreement.
Promediation (2022)	Fieldwork-based assessment places northern Ghana and Togo within the evolving jihadist-threat environment.	Contextual analysis; not a harmonised Ghana annual-event count.
de Bruijne et al. (2024)	40 suspected extremist-linked activity records in Ghana since 2015; 28 since 2022; two classified as violent.	Published research count; underlying record-level file not public; suspected activity is not confirmed attacks.
Lewis & Adombila (2024)	Security and diplomatic sources alleged procurement, refuge and treatment involving militants from Burkina Faso.	Investigative allegations; anonymity of some sources and competing interpretations.
Reuters (2024), reporting Ghana ministry statement	Ghanaian government rejected suggestions of a non-aggression policy or tacit agreement.	Official rebuttal; does not independently prove complete border control.

Note. Figures in the Clingendael row are reproduced from the published report, not independently reconstructed event-level data. "Two violent incidents" refers to the source's classification and is not an independently verified national terrorist-attack count.

Taken together, the sources support a real security-governance dilemma but not the stronger proposition that the state adopted a single coherent policy of controlled permeability. The regional threat is documented; formal preventive commitments are documented; and allegations of clandestine logistical movement are reported in field research and investigative journalism. The allegation of tacit accommodation is specifically disputed by Ghana's government. Nor can the relative absence of major attacks on Ghanaian targets be confidently attributed to one state policy, as attacker incentives, deterrence, local intelligence, opportunity and underreporting are alternative explanations.

4.2 Fiscal relationships from reconstructed World Bank observations

Table 2. Ghana fiscal indicators for the common period, 2010–2022 (% of GDP)

Year	Military expenditure	Government health expenditure	Government education expenditure
2010	0.283	2.260	5.541
2011	0.435	2.354	8.141
2012	0.593	1.979	7.919
2013	0.400	1.858	4.576
2014	0.485	1.409	4.400
2015	0.393	1.594	4.434
2016	0.291	1.300	4.395
2017	0.313	1.631	3.534
2018	0.326	1.371	3.886
2019	0.344	1.972	3.153
2020	0.351	2.528	3.409
2021	0.383	2.099	3.401
2022	0.336	2.037	2.910

Note. World Bank WDI indicators MS.MIL.XPND.GD.ZS, SH.XPD.GHED.GD.ZS and SE.XPD.TOTL.GD.ZS; original annual observations downloaded on 15 October 2026. The table shows descriptive levels, not a causal allocation comparison.

Table 3 presents regressions estimated anew from the official WDI country series for the common period 2010–2022. All outcomes and the explanatory indicator are percentage points of GDP; a coefficient therefore gives the expected difference in the outcome share associated with a one-percentage-point difference in the military share in the fitted descriptive equation.

Table 3. Descriptive regressions of expenditure shares on military spending, 2010–2022

Statistic	Health expenditure (% of GDP)	Education expenditure (% of GDP)
Annual observations (N)	13	13
Pearson correlation (r)	+.059	+.618
OLS military coefficient (β)	+0.267	+12.078
95% confidence interval for β	[−2.747, 3.281]	[1.879, 22.277]
Conventional OLS p value	.849	.024
HC3-robust p value	.840	.075
R^2	.003	.382

Note. Researcher calculations using WDI indicators MS.MIL.XPND.GD.ZS, SH.XPD.GHED.GD.ZS and SE.XPD.TOTL.GD.ZS, retrieved 15 October 2026; N = 13 annual observations. The coefficient units are percentage points of outcome GDP share per one percentage point of military GDP share. HC3 p values adjust standard errors for heteroskedasticity but do not resolve serial dependence or causal identification.

The health correlation is close to zero (r = .059), and the coefficient is imprecise (β = +0.267, p = .849). For education, the fitted association is positive (r = .618; β = +12.078; p = .024 under conventional OLS). However, the education coefficient does not meet the .05 threshold with HC3 errors (p = .075). The very small variation in military expenditure makes the one-percentage-point coefficient an extrapolative unit change; it should not be interpreted as a realistic annual budget shock. These results do not reproduce the negative relationships claimed in the initially submitted Table 2.

Sensitivity analyses reinforce the need for restraint. In the first differences (2011–2022), the health coefficient is −0.333 (p = .777 conventional OLS) and the education coefficient is +8.680 (p = .016 conventional; HC3 p = .167). With GDP growth and inflation included, the military coefficient is −0.026 for health (p = .987 conventional) and +9.194 for education (p = .032 conventional; HC3 p = .054). Durbin–Watson statistics of approximately 0.84 for the health level model and 0.60 for education suggest persistent residual patterns; they are not grounds for claims of robust statistical significance. At this sample size, even nominal p values should be treated as exploratory.

5. Discussion

5.1 What the border evidence can and cannot show

The documentary comparison reveals three overlapping but non-equivalent features. First, policy and institutional research document preventive national-security commitments, intelligence activity and regional

security cooperation (Ministry of National Security, 2020; Prah & Chanimbe, 2021). Second, Clingendael's research describes suspected extremist-linked cross-border activity and a qualitative assessment that some movements may have gone unchallenged (de Bruijne et al., 2024). Third, the Ghanaian authorities rejected the suggestion of a non-aggression arrangement (Reuters, 2024). The coexistence of these features makes "permeable protection" a potentially useful interpretive construct, but the competing explanations identified in Section 2.2 remain unresolved.

A strength of the revised approach is that it no longer equates all reported arrests, low-level criminality or informal movement with terrorist penetration. A verified kidnapping count would still require an explicit rule for excluding ordinary criminal kidnapping and identifying links to the Sahelian insurgency. Similarly, a change in arrest numbers could arise from enforcement intensity rather than increased militant presence. Neither the revised article nor the cited Clingendael report supplies a public, independently reproducible Ghana-wide annual time series for those variables. The article therefore makes no statistical claim that insecurity increased by a particular percentage during 2018–2023.

5.2 Reassessing the security–development proposition

The reconstructed fiscal evidence reverses the directional claim in the original submission. Rather than finding statistically supported negative associations, the common-period data show no discernible bivariate health relationship and a positive but robustness-sensitive education relationship. This does not establish that security expenditure benefits social spending. It may reflect common budget conditions, time patterns, differences in data construction and external macroeconomic shocks. More fundamentally, correlations among GDP shares do not show which sector obtained funding at another sector's expense. Any future causal test would require detailed approved and executed budgets, border-security spending classifications, stronger controls and a design that can address simultaneity and policy timing.

The fiscal result also changes the discussion of development priorities. Education spending as a GDP share declined over the 2010–2022 period, a trend with possible implications for human capital and local opportunity. Yet the military share did not exhibit an offsetting sustained increase over the same interval, and the bivariate estimate is positive, not negative. A policy argument for protecting education provision may be sound for social and security reasons, but it cannot be justified by claiming that the particular regressions quantify money taken from classrooms to fund the military.

Three alternatives should be distinguished. A displacement hypothesis predicts that security appropriations constrain some social allocations within a binding expenditure envelope. A common-capacity hypothesis predicts that revenues or external financing expand or contract multiple sectors together. A denominator hypothesis predicts that measured GDP shares change partly through GDP revisions or shocks, even when nominal sector budgets behave differently. The present data cannot adjudicate these mechanisms. The observed fiscal association and the qualitative concern about northern vulnerability should therefore remain connected at the level of policy relevance, not falsely fused into a demonstrated causal pathway.

5.3 Implications and further research

Two policy implications follow, both conditional. First, public authorities should report border-management programmes and their financing with sufficient granularity for independent scrutiny, including the distinction between defence, immigration, policing, community-prevention and social expenditure. Second, preventive security should include local consultation and lawful cross-border livelihood considerations rather than treating all mobility as suspicious (Pul, 2023; Merdiemah & Danso, 2025). Neither recommendation depends on accepting the unproven proposition of an official policy of tolerance.

The clearest empirical extension would register a transparent ACLED extraction or other event-level archive, attach event IDs and exact inclusion rules, distinguish attacks from logistics or arrests, and cross-check those data against official administrative records. A second extension would obtain directly attributable documentary or interview evidence concerning the motivation for selective non-intervention, while safeguarding respondents and providing space for official challenge. These steps could assess whether the proposed "permeable protection" category has explanatory value beyond established concepts of uneven enforcement and constrained governance.

6. Conclusion

Ghana's geographic proximity to violence in the Sahel and the tensions between formal security obligations and reported activity along the northern frontier justify careful examination. The public documentary record supports concern about security pressures and describes disputed allegations of informal accommodation, but it does not establish an official doctrine or the causal effect of such a doctrine on Ghana's relative avoidance of major extremist attacks. "Permeable protection" should therefore be understood as a

provisional analytical lens open to testing and rejection. Independently reconstructed World Bank expenditure data also do not support the initially asserted negative defence–health or defence–education relationships for 2010–2022. The contribution of the revised article is greater evidentiary discipline: it identifies what security accounts report, what the government disputes, what national fiscal data can show, and what further evidence would be required before stronger causal or policy-intent conclusions could be sustained.

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