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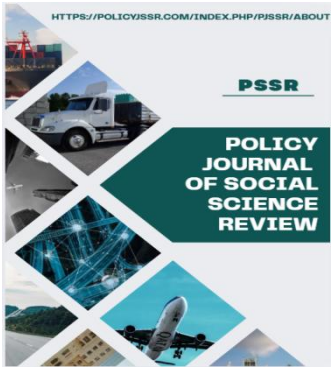

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DRONES, DETERRENCE, AND STRATEGIC AUTONOMY: UNMANNED SYSTEMS IN MIDDLE-POWER MILITARY STRATEGY

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ABSTRACT

This article examines how unmanned aerial systems (UAS) have become central instruments of military strategy for middle powers seeking to strengthen deterrence, project force, and pursue greater strategic autonomy. Drawing on deterrence theory, military innovation theory, and middle-power theory, and employing a qualitative comparative case-study methodology, the article analyses the drone programmes of Turkey, Israel, Iran, and India/Pakistan as analytically distinct yet interconnected cases. It argues that, for middle powers constrained by limited defence budgets, alliance dependencies, and asymmetric exposure to great-power competition, drones do not merely supplement conventional military capability—they reconstitute the very logic of deterrence and strategic positioning. By enabling precision strike, persistent surveillance, force multiplication, and credible deterrence signalling at relatively low cost, unmanned systems allow middle powers to compress the technological advantage of great powers, manage escalation thresholds, reduce alliance dependency, and expand regional influence. The article makes an original theoretical contribution by proposing the concept of 'asymmetric deterrence through unmanned capability' (ADUC) as a framework for understanding how militarily intermediate states leverage drone technology to achieve strategic effects disproportionate to their overall power position. The findings carry important implications for arms control, crisis stability, and the evolving character of regional security competition.

Keywords: drones; unmanned aerial systems; middle powers; deterrence; strategic autonomy; asymmetric warfare

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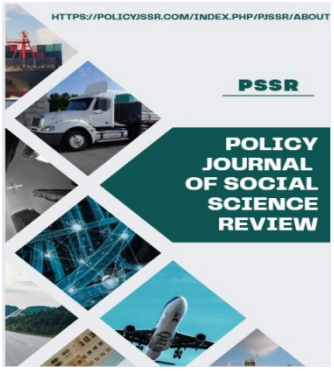

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1. Introduction

The rapid proliferation of unmanned aerial systems across the militaries of middle powers represents one of the most consequential developments in contemporary strategic studies. Over the past decade, states that occupy an intermediate position in the international hierarchy—possessing sufficient resources and ambition to project regional influence but unable to sustain the full-spectrum military capability of great powers—have embraced drones not simply as tactical adjuncts, but as instruments of broader strategic purpose. The battlefields of Nagorno-Karabakh in 2020, the Libyan civil war, and the early phases of Russia's invasion of Ukraine offered vivid, real-time demonstrations of what a medium-altitude, long-endurance unmanned combat aerial vehicle (UCAV) could accomplish against mechanised formations, air defence systems, and logistical nodes. For states watching those conflicts, the lesson was clear: drone technology offered a pathway to credible deterrence, force projection, and strategic autonomy at a fraction of the cost of conventional military modernisation.

Yet despite the pace of operational change, the scholarly literature has been slower to theorise what drone acquisition and employment mean specifically for *middle-power* strategy. The predominant focus of drone scholarship has been either on great-power use—above all American targeted-killing campaigns in Afghanistan, Pakistan, Yemen, and Somalia—or on broader questions of proliferation risk, international norms, and arms control. The strategic implications of UAS for states that are neither great powers nor minor actors remain comparatively underexplored, a gap this article seeks to address.

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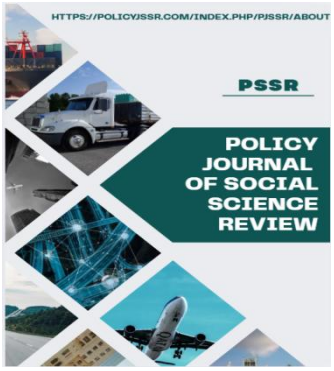

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This article advances three interconnected arguments. First, drones allow middle powers to operationalise deterrence in novel ways—enabling what the article terms 'asymmetric deterrence through unmanned capability' (ADUC)—by creating credible punishment and denial capacity against technologically superior adversaries without requiring parity in conventional arms. Second, drone acquisition and indigenous production constitute a direct expression of strategic autonomy, reducing dependency on great-power arms transfers and enabling independent military action in contested regional environments. Third, through selective operational deployment and conspicuous export, middle powers deploy drones as instruments of regional influence, reshaping alliance structures and security architectures in their respective neighbourhoods.

2. Literature Review

The scholarly literature on drones and unmanned systems has grown considerably since the early 2010s, yet it remains organised around several distinct, and insufficiently integrated, conversations.

2.1 Drone Proliferation and International Security

The foundational debate on drone proliferation was structured by Horowitz, Kreps, and Fuhrmann's influential assessment, published in *International Security*, which argued that the consequences of drone proliferation for international security are more modest than popular accounts suggest. Their analysis examined the effects of UAVs across six contexts—counterterrorism, interstate conflict, crisis onset and deterrence, coercive diplomacy, domestic repression, and non-state actor use—concluding that current-generation drones are unlikely to produce the catastrophic destabilisation that some anticipated. However, critics, notably Boyle, countered that Horowitz and colleagues underestimated the erosion of deterrence through repeated drone

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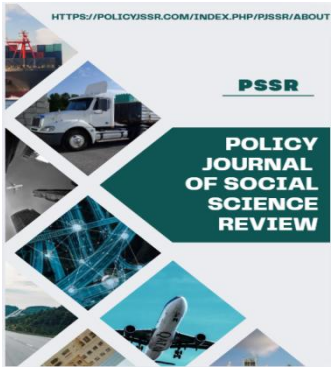

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incursions and the gradual normalisation of unmanned lethal force.

Zegart offered a more nuanced view of the coercive potential of drones, arguing in the *Journal of Strategic Studies* that, while current-generation drones are often considered poor coercion tools, they offer three distinctive advantages: sustainability in long-duration conflicts, certainty of precision punishment, and a dramatic asymmetry in the relative costs of war between drone-equipped and drone-less states. Her survey-based findings have proved particularly instructive for understanding how drone capability reshapes adversarial psychology—a dimension highly relevant to middle-power deterrence.

The proliferation dynamics themselves have attracted sustained attention. Fuhrmann and Horowitz's analysis of the determinants of armed drone acquisition demonstrated that states most likely to pursue UCAVs are those with higher threat perceptions, greater financial resources, and prior experience of conflict—a profile that maps closely onto the middle powers examined in this article. Meanwhile, the diffusion of drone technology has created what Gilli and Gilli described as a paradox: while small-platform drone technology is relatively accessible, sustaining large-scale operational effectiveness requires substantial industrial, organisational, and infrastructural capacity, creating differential barriers to meaningful military drone power.

2.2 Drone Warfare in Practice: Case-Specific Literature

Turkey's emergence as a drone power has received growing attention. Rossiter and Cannon's study in *Defence & Security Analysis* traced Ankara's rise as a drone power to a non-linear learning process, in which Turkish political-military leaders absorbed lessons from early operational deployments in Syria, Libya, and Nagorno-Karabakh. Soyaltin-Collela and Demiryol, writing in *Third World Quarterly*, situated Turkey's drone warfare within a broader analysis of

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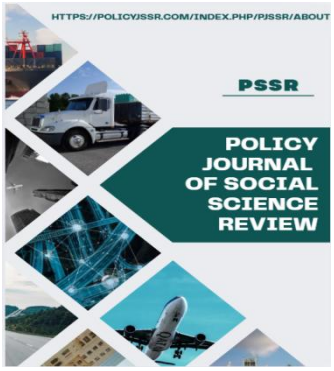

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middle-power activism, arguing that drone capability served not only military but also regime-legitimising and diplomatic functions.

Israel's UAV programme, among the world's most sophisticated, has been examined through the lens of operational sustainability and the transformation of warfare. Borg's study in *Security Dialogue* argued that the combined tactical use of Israeli UAVs for intelligence, surveillance, and reconnaissance (ISR) produced a strategic-level effect by dramatically enhancing the field of perception and enabling the Israel Defence Forces (IDF) to control battle rhythm while minimising casualties. The loitering munition—exemplified by Israel's Harop—has emerged as a particularly consequential capability, blurring the line between conventional air strike and persistent deterrence.

Iran's drone programme has attracted substantial policy attention, particularly following the deployment of Shahed-series loitering munitions in Ukraine from 2022 onwards. Eslami's analysis established that Iran's drone strategy is organised around three pillars—proxy warfare, asymmetric warfare, and domestic deterrence—and that UAV development is directly linked to Iran's larger objective of projecting influence while compensating for its conventional military limitations. The Middle East Council on Global Affairs has further documented that Iran frames its missile and drone programme explicitly as a deterrence instrument designed to challenge US and Israeli aerial hegemony in the region.

For South Asia, research from the Stimson Center has examined the strategic stability implications of India and Pakistan's expanding drone programmes, noting that India's swarm drone aspirations pose direct counterforce challenges while Pakistan deploys UAVs principally to reinforce its deterrent posture and improve crisis management through ISR. This dyadic dynamic—where both states use drone

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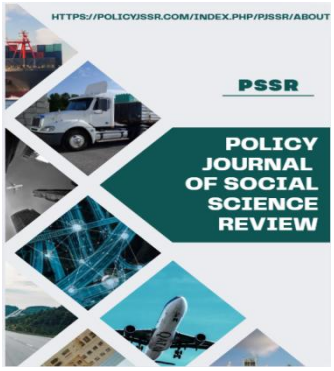

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capability partly as deterrence signalling—illustrates the complexity of unmanned systems in nuclearised regional environments.

2.3 Middle-Power Theory and Strategic Autonomy

The theoretical foundations of middle-power analysis were substantially shaped by Cooper, Higgott, and Nossal's canonical study, which defined middle powers through their behavioural disposition toward multilateralism, compromise, and what they termed 'good international citizenship'. However, the 'new' or 'emerging' middle powers of the Global South—Turkey, Iran, India, and Israel among them—display a strikingly different behavioural profile: assertive, unilaterally inclined, and willing to use military tools to secure regional advantage. Jordaan's distinction between 'traditional' and 'emerging' middle powers is instructive here, as emerging middle powers tend to prioritise sovereignty, resist institutional constraint, and pursue power-based regional influence.

The concept of strategic autonomy—the capacity of a state to pursue its security objectives without being structurally dependent on an external patron—has received renewed attention in security studies. For middle powers embedded in asymmetric alliance relationships, strategic autonomy is a perennial aspiration rather than a stable condition. The acquisition of indigenous drone production capacity has emerged as one of the most direct expressions of this aspiration, reducing technological dependence and enabling the kind of independent military action that alliance constraints might otherwise inhibit.

2.4 Gaps in the Literature

Three significant gaps emerge from this review. First, the deterrence-theoretic implications of drone acquisition for middle powers remain underdeveloped; most deterrence scholarship either focuses on nuclear weapons or on great-power conventional military capability. Second, existing case studies tend to treat drone programmes in isolation rather

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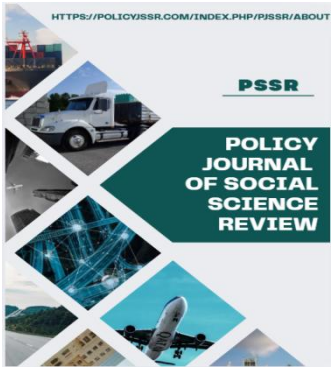

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than comparatively, limiting the scope for theoretical generalisation. Third, the relationship between indigenous drone production and strategic autonomy, while noted descriptively, has not been theorised in a systematic framework. This article seeks to address all three gaps.

3. Theoretical Framework

The article draws on three theoretical traditions, weaving them into an integrated analytical framework centred on the concept of asymmetric deterrence through unmanned capability (ADUC).

3.1 Deterrence Theory and Its Extensions

Classical deterrence theory, as developed by Schelling and others, holds that deterrence operates through two mechanisms: denial (convincing an adversary that attack cannot achieve its objectives) and punishment (threatening costs that outweigh potential gains). Deterrence is credible when the threatened costs are both sufficient and believable. For middle powers, however, the credibility problem is acute: they often lack the military capacity to threaten punishment commensurate with a great-power adversary's tolerance, and their resolve may be doubted.

Drone technology intervenes in this calculus in three ways. First, by enabling persistent surveillance, drones eliminate information asymmetries that undermine deterrence credibility—an adversary cannot be confident that its military movements go undetected. Second, by offering precision strike capacity at relatively low unit cost, drones make the punishment threat more credible by demonstrating operational resolve without requiring mass mobilisation or acceptance of prohibitive human costs. Third, loitering munitions and one-way attack drones complicate adversarial defence planning by saturating air defence systems and creating ambiguity about attack vectors and timing. Together, these effects allow a middle power to hold credible deterrence postures against superior adversaries that traditional

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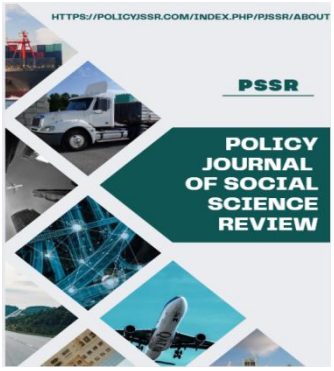

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conventional force structures could not sustain.

3.2 Military Innovation Theory

Military innovation theory, as developed by Rosen and subsequently refined by a generation of security studies scholars, focuses on the conditions under which states generate genuine doctrinal and technological innovations rather than merely acquiring new equipment. The drone programmes of middle powers such as Turkey and Israel exemplify what might be called 'experiential innovation': rather than developing drone doctrine in laboratories or through simulation, these states generated doctrinal insights through operational deployment in real conflicts;Syria, Libya, Gaza, and Nagorno-Karabakh;and then incorporated those lessons into successive platform generations and tactical procedures. This experiential cycle has given operationally experienced middle powers a doctrinal advantage over states that have merely purchased drone platforms without corresponding battlefield experience.

3.3 Middle-Power Theory Revisited

This article adopts a modified version of middle-power theory that departs from the traditional behavioural emphasis. Whereas Cooper, Higgott, and Nossal emphasised multilateralism and compromise as the hallmarks of middle-power conduct, the cases examined here are better characterised by what might be called 'assertive middle power' behaviour: seeking regional influence through bilateral security partnerships, selective military intervention, and the leveraging of niche technological capabilities. Drone technology is central to this assertive posture, allowing states to project force and signal resolve in ways that punch above their conventional military weight.

3.4 The ADUC Framework

The concept of asymmetric deterrence through unmanned capability (ADUC) integrates these three theoretical traditions. ADUC describes the strategic logic by which a middle power uses drone

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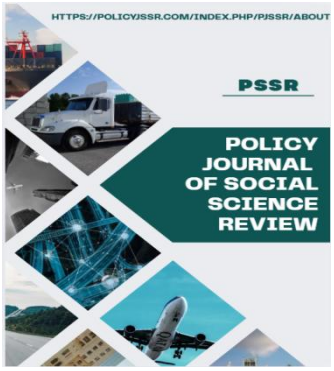

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technology, through surveillance, precision strike, loitering munitions, and force multiplication, to create and sustain deterrence postures against adversaries who are, in aggregate military terms, more powerful. ADUC operates through four pathways:

(i) Credibility reconstruction: by demonstrating operational drone capability, a middle power makes deterrence threats more believable even against more powerful adversaries.

(ii) Autonomy enhancement: indigenous drone production reduces alliance dependency, enabling independent decision-making in crises.

(iii) Escalation management: the controllability and precision of drone systems allow middle powers to signal resolve without triggering uncontrolled escalation.

(iv) Regional influence projection: conspicuous drone deployment and export serve as instruments of diplomatic signalling and alliance management.

The following sections test and refine the ADUC framework through comparative empirical analysis.

4. Research Methodology

This article employs a qualitative comparative case-study methodology, which is appropriate given the research objective of building and refining middle-range theory rather than testing a single hypothesis across a large-N dataset. Qualitative case studies permit the examination of causal mechanisms, contextual complexity, and the interaction of strategic, political, and technological variables that quantitative approaches cannot easily capture.

4.1 Case Selection

Four cases, Turkey, Israel, Iran, and the India-Pakistan dyad, were selected on the basis of three criteria. First, each case involves a state (or pair of states) that meets the standard criteria for middle-power classification: sufficient military and economic capability to project regional influence, but insufficient capacity to compete with great powers

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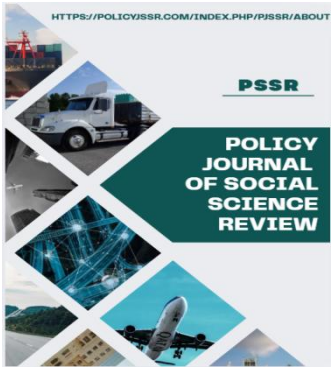

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across all domains. Second, each case involves a substantial and documented indigenous or operationally active drone programme, permitting empirical analysis of strategic use rather than mere acquisition. Third, the cases offer meaningful variation across key analytical dimensions: Turkey and Israel are NATO-affiliated or US-adjacent; Iran operates outside Western alliance structures; India and Pakistan present a nuclearised dyadic context. This variation allows for structured comparison rather than the selection of confirming instances.

4.2 Data Sources

The analysis draws on three categories of sources. First, academic literature from peer-reviewed journals and research monographs published by established academic and policy-research institutions, including Taylor & Francis, SAGE, Oxford University Press, the RAND Corporation, RUSI, IISS, and SIPRI. Second, official and semi-official documents, including defence white papers, parliamentary testimony, military doctrine publications, and think-tank reports from Chatham House, CSIS, and IISS. Third, verified news reporting from specialist defence outlets and investigative journalism, used primarily for operational details that have not yet entered the academic literature. Where primary sources conflict, the article notes the discrepancy and offers the most conservative empirically defensible assessment.

4.3 Analytical Approach

The empirical analysis applies a structured, focused comparison, using the ADUC framework as the analytical lens. For each case, the article examines: (a) the history and current status of the drone programme; (b) operational deployment patterns and the stated or inferred strategic rationale; (c) the relationship between drone capability and deterrence posture; (d) the degree to which drone acquisition has enhanced strategic autonomy; and (e) the use of drone capability as an instrument of

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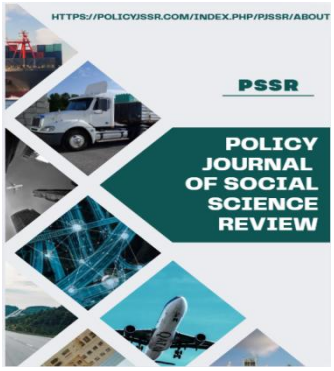

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regional influence. This structured approach enables cross-case comparison while preserving the contextual richness of each case.

5. Empirical Analysis

5.1 Turkey: Drones as the Instrument of Assertive Middle-Power Strategy

Turkey's emergence as a drone power is, in many respects, the paradigmatic case of ADUC in action. Ankara's strategic calculus in developing an indigenous UCAV capability was shaped by two structural imperatives: first, a growing perception that US arms transfers, particularly the long-delayed supply of armed Predator drones for counterinsurgency operations against the Kurdistan Workers' Party (PKK), were being used as political leverage; and second, a broader ambition to reduce technological dependency and pursue a more assertive foreign policy. The Bayraktar TB2, developed by the private Turkish firm Baykar, became the instrument through which these imperatives were operationalised.

The TB2 is a medium-altitude, long-endurance (MALE) UCAV capable of carrying four laser-guided smart munitions, with a stated endurance of up to 27 hours and an operational ceiling of approximately 27,000 feet. What distinguished the TB2 from comparable systems was not its raw performance parameters but its combat record. Turkish military commanders deployed the TB2 against PKK positions in Iraq and Syria from 2016 onwards, accumulating operational experience that drove successive improvements in both platform and doctrine. The decisive test came in March 2020, when Ankara deployed TB2s in Idlib province, Syria, to devastating effect against Assad regime armoured formations. The TB2 subsequently demonstrated its lethality in the 2020 Nagorno-Karabakh War, where Azerbaijani forces equipped with Turkish drones achieved rapid armoured force attrition against Armenian formations, and in the early stages of Russia's invasion of Ukraine, where Ukrainian

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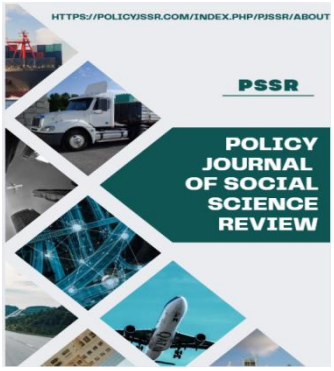

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TB2 operators disrupted Russian logistics and armoured columns.

From an ADUC perspective, Turkey's drone strategy exhibits all four pathways of the framework. Credibility reconstruction was achieved through repeated operational success: adversaries and regional audiences could observe that Turkish drone threats were not rhetorical. Autonomy enhancement was structural: by developing indigenous production capability, Ankara reduced its dependence on US and Israeli arms transfers and gained the freedom to deploy lethal force in Syria, Libya, and northern Iraq without requiring allied approval. Escalation management was evident in Turkey's calibrated use of drone strikes to signal resolve against both non-state actors and the forces of third-party states, while remaining below the threshold that would require a conventional military response from great powers. Finally, regional influence projection was achieved through drone diplomacy: by 2024, Turkey had exported TB2s to more than thirty countries, transforming the drone into an instrument of foreign policy and defence industrial statecraft.

Soyaltin-Collela and Demiryol have argued persuasively that Turkey's drone warfare also serves domestic political functions, bolstering regime legitimacy and nationalist mobilisation. While this dimension falls outside the strictly strategic focus of the present article, it underscores the multidimensional character of drone power for middle states whose foreign policy is also shaped by internal political dynamics.

5.2 Israel: Drone Warfare as Strategic Necessity and Technological Mastery

Israel's UAV programme is among the oldest and most sophisticated in the world, predating the post-2000 UCAV revolution by several decades. The Israel Defence Forces first deployed reconnaissance drones during the 1973 Yom Kippur War and developed the first purpose-built mini-UAV, the Scout, in collaboration with Israeli Aerospace

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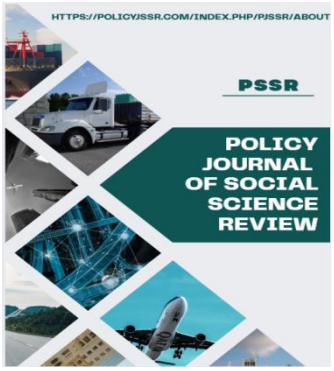

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Industries (IAI) in the late 1970s. The 1982 Lebanon War saw Israeli UAVs used to decoy Syrian air defences and provide real-time intelligence, enabling one of the most one-sided air campaigns of the Cold War era.

The strategic logic driving Israel's drone programme is rooted in a distinctive set of constraints. As a small state surrounded by hostile or unpredictable neighbours, Israel faces the permanent imperative of deterrence credibility and military superiority. Human casualties, both military and civilian, are politically and socially sensitive in ways that shape operational doctrine. The drone, which eliminates pilot risk, extends operational endurance, and compresses the sensor-to-shooter loop, was an almost perfectly adapted instrument to Israel's strategic environment. Borg's analysis demonstrated that the IDF's use of the Hermes 450 and Heron platforms in the 2006 Lebanon War reduced the sensor-to-shooter loop to approximately two minutes, a transformation that fundamentally altered the operational pace of Israeli ground operations.

For Israel, the drone also serves as a deterrence instrument in the classical sense. A large and capable UAV force, including the MALE-class Heron TP, which has the wingspan of a Boeing 737, can hold targets at depth, persist over adversary territory for extended periods, and strike with precision. Israeli analysts have observed that a robust drone force buttresses both conventional deterrence, by demonstrating an ability to destroy adversary military assets, and extends the reach of Israeli strike capability into strategic depth without generating the political costs of manned aircraft losses. Loitering munitions, most notably the Harop anti-radiation drone, further strengthen deterrence by threatening adversary air defence radars with a weapon that can loiter for extended periods before striking, creating a permanent psychological burden on air defence operators.

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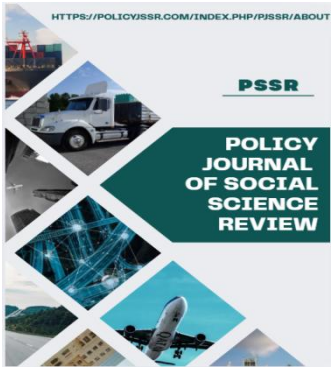

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Israel's strategic autonomy through drone capability is perhaps the most complete of the cases examined here. The IDF relies primarily on indigenous systems developed by IAI and Elbit Systems, supplementing Israeli military action with export of drone technology to generate diplomatic leverage and defence industrial revenue. The drone programme has also allowed Israel to conduct operations across the region, including strikes attributed to Israeli forces in Syria, Iraq, and Yemen, without generating the manned-aircraft losses that would create domestic and international political complications. The drone thus embodies Israel's strategic doctrine of maintaining freedom of action and escalation dominance in its regional environment.

5.3 Iran: Asymmetric Drone Power and the Logic of Forward Deterrence

Iran's drone programme illustrates ADUC in a qualitatively different strategic context: a state that is militarily isolated, economically constrained by sanctions, and confronting adversaries with significant conventional military advantages. Tehran's approach to drone development has been shaped by three structural conditions: the weakness of its conventional air force, the limitations imposed by international arms embargoes, and the strategic imperative of deterring potential US or Israeli military action while projecting influence through proxies across the Middle East.

Iran's drone industrial base is the product of decades of reverse engineering, indigenous innovation, and, since 2022, export-driven refinement. The Shahed-136 loitering munition, which attracted international attention following its transfer to Russia and deployment against Ukrainian infrastructure, is a representative product of Iran's approach: a low-cost, mass-producible, one-way attack drone that trades precision and speed for volume and economic asymmetry. The strategic logic is explicitly attritional: where a single interceptor missile costs many times the value of a

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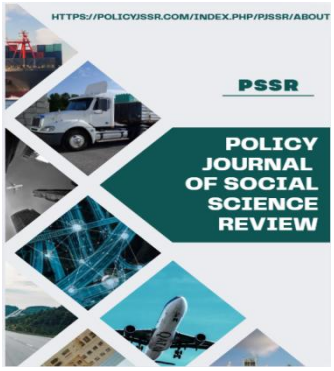

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Shahed-136, a defender facing mass drone attacks faces unsustainable exchange ratios. From a deterrence perspective, this transforms the drone from a tactical harassment tool into a strategic instrument designed to erode adversarial endurance and exhaust air defence resources.

Iran's official strategic doctrine, described by Tehran's leadership as 'forward defence' or 'offensive defence,' holds that Iran should address threats before they reach Iranian territory. Drones are central to this doctrine, enabling Iran to project threat at extended ranges through proxy forces, Houthi attacks on Saudi Arabian infrastructure from Yemen, Hezbollah drone reconnaissance over Israel, and Iraqi proxy attacks on US bases, without the attribution clarity that manned aircraft strikes would create. This deliberate ambiguity serves deterrence by keeping adversaries uncertain about response thresholds and escalation risks.

Iran's drone programme thus exemplifies ADUC's credibility reconstruction and escalation management pathways, but it operates through a distinctive mechanism: not the transparent, publicly credited operational success that characterises Turkish drone diplomacy, but the deniable, proxy-mediated threat that characterises Iran's strategic culture. Strategic autonomy is maximised through indigenous production and arms-embargo circumvention, while regional influence is projected through the supply of drone capability to allied non-state actors across the region.

5.4 India and Pakistan: The Drone Dimension of a Nuclearised Rivalry

The India-Pakistan dyad presents a uniquely complex application of ADUC: two nuclear-armed middle powers incorporating drone capability into a security competition that operates under nuclear shadow and is heavily constrained by escalation risks. Both states have developed drone programmes over several decades, but the pace of

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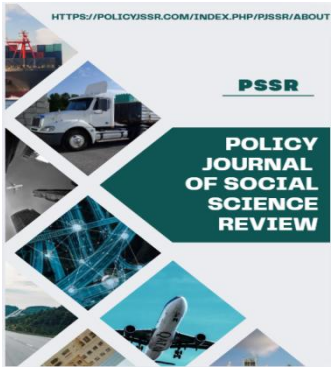

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acquisition and the strategic ambition underlying it have accelerated significantly in the 2020s.

India's drone strategy is oriented primarily toward force modernisation and the management of two simultaneous strategic threats: Pakistan to its west and China to its north. By mid-2024, India had inducted between 2,000 and 2,500 drones across its armed services, with total expenditures approaching USD 400 million. The induction in February 2023 of a heterogeneous swarm UAV system developed by NewSpace Research and Technologies marked a qualitative step-change: India was no longer merely acquiring ISR drones but developing autonomous swarm capabilities with direct counterforce implications. India also deploys Israeli-supplied Heron and Heron TP UAVs along the Line of Control with Pakistan and the Line of Actual Control with China, providing persistent surveillance and deterrence signalling.

Pakistan's drone strategy is more explicitly deterrence-focused. Positioned as the world's fourth-largest drone operator, Pakistan has pursued a dual-track approach: acquiring advanced platforms from China (the CH-3A, redesignated Burraq) and Turkey (the TB2), while developing a domestic production capability through the Pakistan Aeronautical Complex and its derivative platforms, the Shahpar series. Pakistan's UAV deployment is concentrated on ISR along the Line of Control and counterinsurgency operations in the tribal areas, with drone capability serving to reinforce its deterrent posture by demonstrating surveillance coverage and precision strike readiness without requiring dangerous conventional force mobilisation.

The South Asian drone competition illustrates a tension inherent in ADUC: while drone capability can enhance deterrence stability by improving crisis communication and demonstrating precision resolve, it can simultaneously

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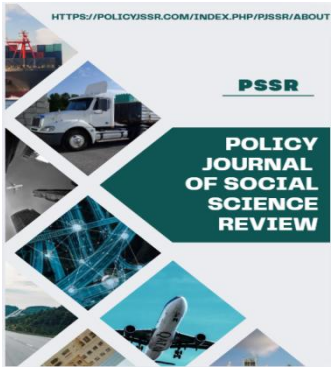

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destabilise deterrence by introducing counterforce capabilities that threaten second-strike assets, compress decision-making timelines, and create ambiguity about the military threshold for nuclear escalation. Research from the Stimson Center has flagged this risk explicitly, noting that India's swarm drone programme poses a direct challenge to deterrence stability by creating capabilities that could, in principle, be used to target Pakistani nuclear delivery systems. The ADUC framework thus carries an inherent tension between its stabilising deterrence functions and its escalatory potential.

6. Discussion

The comparative analysis of the four cases reveals several cross-cutting findings that refine and extend the ADUC framework.

6.1 Drones as Deterrence Instruments: Convergence and Divergence

All four cases confirm that drone capability serves deterrence functions, but the mechanisms differ significantly. Turkey and Israel rely on transparent capability demonstration, operational success in documented conflicts, to reconstruct deterrence credibility. Iran relies on deniable threat projection through proxies. India and Pakistan use drones as ISR and signalling instruments in a dyadic competition managed under nuclear constraints. These differences are not merely tactical; they reflect fundamentally different strategic cultures, alliance relationships, and threat perceptions.

The common thread is the drone's capacity to extend deterrence postures at bearable cost. Where conventional military parity with a more powerful adversary is unachievable, the ability to impose specific, credible, and persistent costs through unmanned precision strike constitutes a meaningful deterrence contribution. The cases thus support Zegart's argument that drones offer unique coercive advantages,particularly the sustainability of threat across long-

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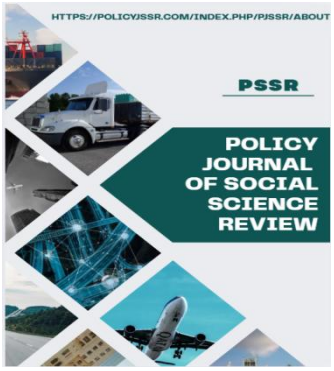

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duration confrontations and the certainty of precision punishment, but extend that argument to the specific context of middle-power deterrence.

6.2 Strategic Autonomy Through Indigenous Production

The relationship between indigenous drone production and strategic autonomy emerges clearly across the cases. Turkey's frustration with US conditionality on arms transfers was a direct catalyst for Baykar's development of the TB2. Israel's sustained investment in domestic drone production has given the IDF a freedom of military action across its regional environment that dependence on US-supplied platforms would have constrained. Iran's indigenisation of drone technology, driven by arms embargoes, has transformed a strategic liability (sanctions-induced isolation) into a form of operational independence. India's 'Make in India' defence initiative explicitly targets drone production as a strategic autonomy priority.

This pattern suggests a theoretical proposition: for middle powers, indigenous drone production capacity constitutes a form of what international relations scholars might call 'structural autonomy', the capacity to act independently of great-power permission structures in security-critical situations. The drone, precisely because of its relatively lower unit cost and accessible manufacturing base (compared to advanced fighter aircraft or ballistic missile systems), represents the most achievable near-term vehicle for this structural autonomy.

6.3 Drones, Regional Influence, and the Transformation of Military Diplomacy

The cases also reveal a consistent pattern of drone capability being leveraged for regional influence beyond purely military deterrence. Turkey's drone exports, reaching more than thirty countries by 2024, have transformed the TB2 into a foreign policy instrument, deepening bilateral security relationships, generating diplomatic leverage, and establishing

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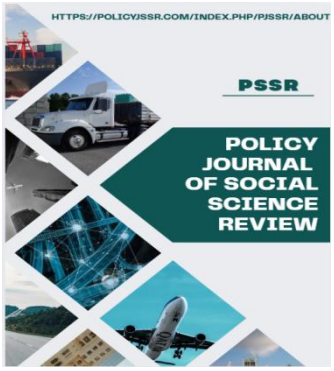

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Ankara as a defence-industrial partner for states seeking to diversify away from great-power dependency. Israel's drone exports similarly serve diplomatic and intelligence-sharing functions. Iran's provision of Shahed drones to Russia demonstrated that drone transfers can constitute a form of strategic alignment that reshapes great-power relationships.

This dimension of drone power has not been adequately theorised in the existing literature. The concept of 'drone diplomacy', the deliberate use of drone transfers and joint production arrangements to build security relationships and project influence, deserves sustained theoretical attention as it represents a qualitatively new instrument in middle-power foreign policy.

6.4 Limitations and Risks of ADUC

The ADUC framework also reveals inherent tensions and risks. First, drone capability is not a permanent asymmetric advantage: as counter-UAS technology matures, including electronic warfare, GPS spoofing, AI-enabled air defence systems, and interceptor drones, the relative cost advantage erodes. The Russian deployment of electronic warfare against Ukrainian TB2s after the conflict's early phases illustrated this dynamic: the same drones that achieved decisive effects in March 2022 became substantially less effective as Russian electronic warfare adaptation improved.

Second, in nuclearised environments, drone capability can introduce crisis instability by creating counterforce capabilities and compressing decision-making timelines. The South Asian case is the most acute illustration of this risk, but it is not unique: Iran's drone programmes create analogous pressures on Israeli and Gulf state decision-making in crisis situations.

Third, the normative and legal framework governing drone use, particularly autonomous and loitering systems, remains deeply contested. States that rely on legal ambiguity as a feature of drone strategy may find that evolving

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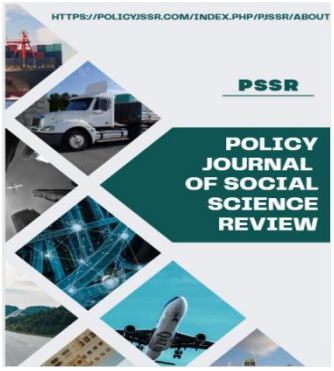

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international norms constrain their freedom of action in ways that conventional military force did not face. This is particularly relevant for middle powers that rely on proxy-mediated drone warfare, as attribution standards evolve.

7. Conclusion

This article has argued that drones and unmanned systems have become central instruments of middle-power military strategy, reshaping deterrence postures, expanding strategic autonomy, and creating new forms of asymmetric regional advantage. Through comparative analysis of Turkey, Israel, Iran, and the India-Pakistan dyad, structured by the theoretical framework of asymmetric deterrence through unmanned capability (ADUC), the article has demonstrated that drone technology allows militarily intermediate states to reconstitute deterrence credibility, reduce great-power dependency, manage escalation in complex regional environments, and project influence beyond their conventional military reach.

The theoretical contribution of this article is threefold. First, the ADUC framework integrates deterrence theory, military innovation theory, and middle-power theory into a coherent analytical lens for understanding drone strategy below the great-power level, a theoretical space that existing scholarship has left underdeveloped. Second, the comparative case analysis reveals that ADUC operates through multiple pathways, credibility reconstruction, autonomy enhancement, escalation management, and regional influence projection—and that different middle powers emphasise different combinations of these pathways according to their distinct strategic cultures and structural constraints. Third, the analysis surfaces the concept of 'drone diplomacy' as a novel instrument of middle-power foreign policy deserving independent theoretical elaboration.

The findings carry important policy implications. For arms control scholars and practitioners, the proliferation of

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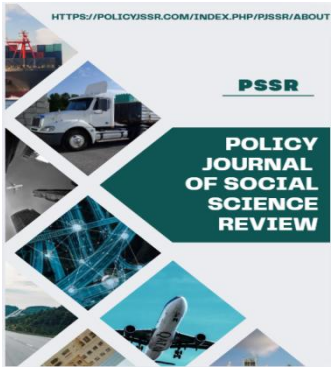

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operationally tested UCAV capability among middle powers presents a more acute governance challenge than earlier proliferation analyses anticipated. The combinations of precision strike, loitering munitions, and proxy transfer create asymmetric deterrence postures that existing arms control regimes are ill-equipped to address. For alliance managers and great-power strategists, the drone-enabled expansion of middle-power strategic autonomy creates new dynamics: allies can now act with greater independence, non-aligned states can resist great-power pressure more effectively, and potential adversaries can project threat at extended ranges without the political costs of conventional military engagement.

For scholars of strategic studies, the drone revolution among middle powers invites a reconsideration of classical power hierarchies. If unmanned systems allow a state to achieve strategic effects, deterrence, force projection, regional influence, that were previously the preserve of great powers, then the structural boundaries of international hierarchy are being renegotiated through technology. The drone is not merely a weapon; it is a structural enabler of middle-power assertiveness in an era defined by great-power competition. Future research should examine the normative and legal dimensions of middle-power drone use, the long-term trajectory of counter-UAS competition, and the implications of artificial intelligence and autonomous systems for the ADUC framework as the technology continues to evolve.

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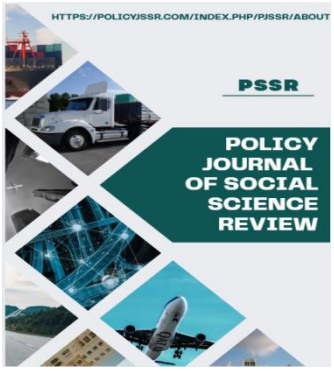

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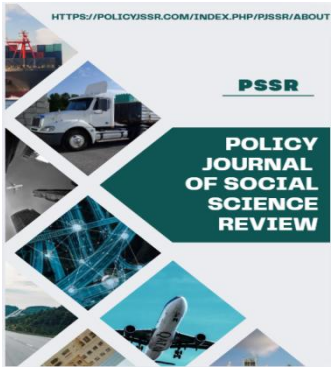

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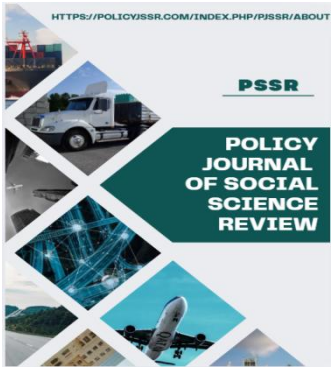

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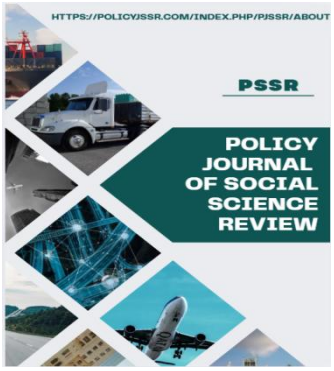

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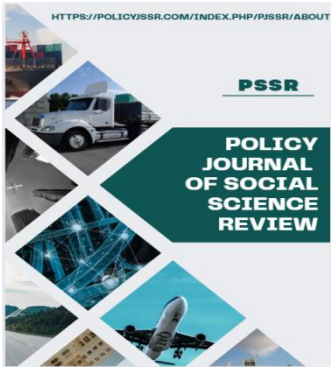

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