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From Platform Purchases to Networked Capability

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Pakistan's defense modernisation should move from platform-led procurement to network-led capability building. Under fiscal constraint, the highest policy priority is not simply buying more aircraft, but increasing the combat productivity of the entire force through AEW&C, electronic warfare, secure data links, C4ISR resilience, mission-data infrastructure, sustainment, and joint training. The issue is not prestige procurement. The issue is capability generated per rupee.

1. Why this is an economic policy question

Pakistan's defense debate is often trapped between two weak positions. One treats defense spending as self-justifying because the subject is sensitive. The other treats defense spending as a simple subtraction from schools, hospitals, and development. Both positions flatten the issue. Public spending, including defense spending, has an opportunity cost; but the real policy question is what the marginal rupee produces. Does it merely buy a visible platform, or does it build an industrial, technological, and organisational capability that Pakistan would otherwise have to import later at higher financial and strategic cost?[2,5]

The question therefore is do we look at Defense spending as "automatically productive". The answer is "no". Defense economics looks at it from another angle, a more disciplined and analytically sound lens: Defense economics judges defense spending by look at attributes such as Is the spending converted to readiness? Has it created the deterrence which it was expected to? Was it also converted to industrial learning ,foreign exchange saving, autonomy in operation, maintenance and even production? Does it promise crisis credibility? Economics of deterrence, a subpart of defense economics is not just concerned with the amount spent by the state but it takes it a step further by asking is the spending architecture designed in a particular way that is able to create capability under constraints? This way of thinking is also consistent with the wider defence-economics literature associated with Hartley, Sandler, and Intriligator, which treats defence not simply as expenditure burden but also in terms of procurement, industrial capacity, strategic choice, and the conversion of spending into usable capability.[17]

When we look at defense spending we also have to look at the Global context. SIPRI report stated that world military expenditures have reached US$ 2.7183 trillion in 2024. According to SIPRI this was the highest total recorded by them till that point. The global military expenditures rose to 2.89 trillion US$ according to Reuters (citing SIPRI) in 2025. This was the 11th consecutive annual increase. Looking at what is happening globally, Pakistan has to revisit and revise defense budgets and the priority spendings. This global trend also shows that Pakistan is not debating or

understanding its defense budget in a demilitarized world. The world we live in, has become such , where insecurity, technology, and power competition are pushing the countries to spend more and more on defense and the acquisition , upgradation and sustainability of hard power[6,7]

A rough price comparison also helps to make the trade-off visible. Exact Pakistani figures should not be put into a public document, and every country buys different packages, but public benchmarks are still useful. India's 36 Rafale package was reported at about 7.8 billion euros, while the US DSCA approval for Bahrain's 19 F-16V aircraft with support was estimated at US$2.785 billion. These numbers are not a perfect comparison, but they show a simple policy reality: one squadron-level purchase can absorb resources equal to a long NCW programme if that programme is planned properly. The question for Pakistan is therefore not whether aircraft are needed; they are. The question is whether part of the same money can produce a greater return when it is put into radar life-extension, data-link security, mission-data support, EW hardening, simulation, and PAC-based sustainment over ten years.[14,15]

2. The capability-conversion problem

Those who still believe in platform-led, platform-dominated military strategy make the crucial mistake of confusing acquisition with capability. The number and generation of Aircrafts, missiles, radars, and the command systems are not capability in isolation. They only become capability after successful integration and a sustained, protected, rehearsed and connected. After that that network is linked it its crucial component of decision making. So , it's the whole that matters, not the parts.in my work on PAC Kamra, I have argued the value of institutions such as PAC. Its not just an ornament to be showcased, its much more than that: PAC translates military spending into real tangible output such as overhaul, production learning, avionics support, radar sustainment, human capital ,and upgradation pathways. At PAC the "ledger" becomes capability[2]

Network-centric warfare clarifies this conversion mechanism. Classic NCW literature defines the concept around information superiority: the ability to connect sensors, decision-makers, and shooters in a way that produces shared awareness, faster command, higher tempo, survivability, and better synchronisation. In simple policy language, NCW is the doctrine that turns scattered assets into a fighting system.[8]

Budget appropriated for sustaining NCW therefore should be treat as budgeting for combat power, neither is it just IT support. A fighter regardless of how advanced it is , will not be utilized properly unless it can be cued, protected, updated, and connected to the overall network put in place. That is why I argue that a modest platform which can be linked to the sensor grid, with a secure communication, Electronic protection and disciplined battle management is likely to produce a greater operational effect.Pakistan does not need to imitate the acquisition theatre of larger powers; it needs to out-convert limited resources into usable capability.[12]

One caution is necessary here. A network should never be allowed to become a single point of failure. If command links are jammed, hacked, degraded, or politically disrupted, the whole architecture can become brittle. Therefore the NCW budget must also carry redundancy, backup communication, decentralised procedures, electromagnetic discipline, manual fall-back drills, and mission command. This does not weaken the argument for NCW; it actually strengthens it because a good network is not only connected, it is also survivable.

Table 1. From platform-led spending to network-led capability

Capability layer	What it does	Economic logic	Budget implication
AEW&C / sensor grid	Extends the air picture, improves track quality, supports interception and battle management.	Raises the productivity of existing fighters and air-defense assets.	Core deterrence infrastructure, not a support luxury.
Information grid / data links	Connects sensors, command centres, and shooters under time pressure.	Reduces duplication, latency, and wasted weapon employment.	Requires ring-fenced funding, encryption, redundancy, and standards.
Electronic warfare and cyber hardening	Protects own network and degrades adversary radar, communications, and decision cycles.	Prevents expensive platforms from becoming brittle under electronic attack.	Dedicated EW, cyber, and mission-data investment.
Engagement grid	Turns awareness into coordinated fires and BVR employment.	Converts information advantage into operational effect.	Integration of targeting systems, weapons, and battle-management procedures.
Training and simulation	Makes the network usable in crisis, not merely connected on paper.	Protects the value of capital equipment by improving human performance.	Recurring joint exercises, simulation, after-action review, and skill retention.
Industrial sustainment	Keeps fleets airworthy, upgradeable, and less dependent on external suppliers.	Saves foreign exchange and reduces political vulnerability.	PAC/APF/MRO/R&D treated as part of national capability, not routine administration.

3. What May 2025 made visible: the kill chain, not the airframe alone

The policy significance of the May 2025 air battle with India lies in understanding . public record regarding the exact number of IAF aircraft downed by Pakistan is contested, but open-source reporting and official claims have made the episode central to the policy debate, including claims regarding the French-made Rafale .It was a Air to Air BVR kill that will be remembered in history. The policy lesson is clear , the outcome was not platform specific it was system specific and that is what Pakistani policy makers , should be looking at: how to sustain this system? How to upgrade it? And how to how to ensure its repeatable. These questions are budget questions as much as they are technical.[9,10,11]

The Kill chain as later reconstructed by Reuters reported that , situational awareness and EW utilization, an efficient sensor to shooter grid were the central pillars of the aerial victory that the PAF had by downing five jets, fighting an Airforce that outnumbered and outspent it. This is where the policy should be directed at. The lethality and effect of the BVR are not endogenous characteristics of the missile itself or its radar. What matters more are aspects such as track quality, identification, datalinks, electronic protection, engagement grids, command discipline and of course confidence in the wider battle architecture.[4,12]

At this point it becomes an issue of public finance and budgeting priorities. That Is, if the decisive variable is the Kill chain then the budget should be directed at strengthening the invisible layer that makes platforms lethal rather than keeping the budget the platform as a more important variable. For instance, in comparison to India Pakistan had a better capability to utilize NCW, while India had focused on buying expensive European fighter jets. The Budget therefore should look at what is needed most. Under the NCW doctrine investments need to undertaken in AEW&C , data-link, security, EW resilience, mission data files cyber security and defense, simulations exercises, joint

procedures and after action learning . these items are not cinematic, yet its these variables that decide whether expensive asset will fight as a system or will remain expensive part of an incomplete machine[1,2,8.]

4. The Iran-Hormuz lesson: diplomatic dividend requires shielding capacity

The ongoing war of Hormuz , which has choked global economy, Pakistan has been instrumental at bringing the warring parties to the table. This signals that both parties see Pakistan as having diplomatic credibility. What is important and significant is that this diplomatic credibility should be converted into diplomatic dividend.

Pakistan's recent diplomatic visibility during the Iran-US confrontation also has an economic dimension. In the author's co-authored article on Pakistan's role as a bridge between rivals, the core argument was that crisis should not be romanticised, but diplomatic credibility should be converted into a "diplomatic dividend": energy assurance, safer trade corridors, labour protection understandings, and better market access. That argument belongs in this Policy Viewpoint because hard credibility and economic diplomacy are not separate worlds.[13]

In simple terms, other countries believe a state more when they see that it can defend its own skies, absorb pressure, keep escalation under control, and still talk to both sides. Capability is not the whole of diplomacy, but it makes the diplomatic word heavier. This is how military readiness enters economic diplomacy: it gives confidence to partners, warning to adversaries, and seriousness to mediation.

Pakistan's real strategic doctrine for the future should be prepared neutrality: neutrality in diplomacy, preparedness in energy, discipline in logistics, protection in labour, and purpose in economic statecraft. That idea can be extended to defense economics. A state that is militarily brittle and weak can never easily convert diplomacy into durable bargaining power. While a militarily credible but economically exposed state also remains vulnerable. Pakistan therefore needs both: a networked deterrence posture and an economic shielding capacity that reduces exposure to energy, logistics, and remittance shocks.[13]

The lesson from Iran is not that missiles are irrelevant. Missiles matter. Drones matter. Political signalling matters. But missiles alone do not provide persistent air control, dynamic interception, integrated air defence, or real-time battle management. For Pakistan, missile capability should complement, not substitute for, a modern networked airpower architecture. The policy issue is therefore not "missiles versus airpower". It is whether Pakistan can integrate sensors, shooters, command systems, cyber resilience, electronic warfare, and diplomacy into a coherent national capability.[18]

5. What should be funded now

Defense spending policy and priorities need to be made narrow. The ongoing war of Hormuz and the our recent conflicts have made it clear Pakistan needs a disciplined, ring-fenced and auditable NCW modernization line that shifts our procurement more towards capability architecture rather than remaining episodic. Such a modernization line will be the connective tissue of deterrence: the information grid, sensor grid. engagement grid, C4ISR integration, electronic warfare,cyber hardening, mission data generation, simulation and training.

The revised policy direction is deliberately narrow. It does not call for open-ended defense spending. It calls for a disciplined, ring-fenced, and auditable NCW modernisation line that shifts Pakistan from episodic procurement to capability architecture. The purpose of such a line is to fund the connective tissue of deterrence: the information grid, sensor grid, engagement grid, C4ISR integration, electronic warfare, cyber hardening, mission-data generation, simulation, and training.1 The main point is simple: Pakistan does not

need open-ended defense spending; it needs a disciplined, ring-fenced, and auditable NCW modernization line that strengthens the systems which make existing platforms more effective.

The protected line also needs a guardian. It should not be left as an open pot of money. The Ministry of Finance should guard fiscal discipline, the Ministry of Defence and Ministry of Defence Production should guard execution, the service headquarters should validate capability, and an authorised parliamentary or official oversight forum should receive a classified annual capability-conversion review. The public version can show headings, progress and auditability, while operational details remain classified. In this way the money is protected without exposing sensitive information.

6. Defence-economics test for future procurement

The policy note proposes a defense economics test that every defense expenditure should pass before approval The proposed test asks five questions.

- Is the particular expenditure contributing to the system, the kill chain or is it merely another platform addition?
- Lifecycle cost: over the life of the particular system what will be the sustainment, spares, software, mission-data, training, and upgrade costs over the system's life?
- Integration value and resilience: is successful integration of the system possible and feasible into our existing sensor grid, datalinks, C4ISR and E-warfare environment; and what fall-back mode exists if a central link is jammed, hacked or degraded?
- Industrial return: Does the expenditure strengthen domestic MRO, avionics, software, testing, or systems-integration capability?
- Strategic autonomy: Does it reduce dependence on vulnerable suppliers, foreign exchange outflows, sanctions risk, and crisis-time delays? And what are the chances of indigenization and TOT.

7. Policy recommendations

The policy note proposes a defense economics test that every defense expenditure should pass before approval The proposed test asks five questions.

- Pakistan needs to have a ring fenced NCW modernization line , that is over and above the conventional expenditure in defense in the routine. The Line should have subheads for the different ingredients of the Network. Such as the engagement grid, sensor grid, the C4ISR integration, EW and Cyber resilience , the simulation and training. [1]
- AEW&C is the core of the deterrence infrastructure therefore it should be treated as a major priority. Its availability, and its capacity of sensor-fusion and Battle management should be protected and enhanced. The AEW&C system is instrumental in increasing the lethality of the fighter platforms and the Air Defense systems in place.[112]
- Pakistan needs to also give special attention to strengthening the Electronic warfare capabilities , cyber hardening and mission data information. Its these that will decide the quality of the response of the Network , if it is attacked.[18]
- The protection and further development of PAC, APF, MRO, avionics, and systems-integration capacity should be a priority and dealt with as a part national economic security. Procurement of higher grade weapon systems and platforms should be complemented with domestic absorption of those technologies, leading the ability to sustain and creation, and upgradation of the necessary skill set.[25]
- We should not just look at platform acquisition but this should be looked at from the feasibility and time needed to integrate those platforms into our Network. The budgets for the integration, the maintenance , the EW updates , cyber protection and the simulation budgets should be kept in mind from the start.

- As a policy Pakistani must ensure that every platform acquisition should be accompanied by integration, spares, training, EW updates, cyber protection, and simulation budgets from the start.
- Pakistan needs to establish an annual capability-conversion review. It is understandable that parliamentary committees or relevant ministries should not be given operational secrets, but there still needs to be a disciplined public-finance framework where it can be shown how defense expenditure is converted into capability, readiness and autonomy. The review should be protected by the Ministry of Finance, Ministry of Defence, Ministry of Defence Production, the relevant service headquarters, and an authorised oversight forum, with classified details kept classified.

8. Conclusion: the real policy message

Pakistan should not approach airpower modernisation as a contest in prestige platforms. That is the wrong debate for a fiscally constrained state. The correct debate is how to obtain the highest deterrence return from every rupee already being spent. In modern warfare, that return increasingly comes from the network: the ability to see first, make sense faster, decide with confidence, transmit securely, and strike through a system that survives electronic attack and operational friction.18

This is why AEW&C, electronic warfare, data links, C4ISR, cyber hardening, mission-data systems, sustainment, and joint training should be treated as core economic and security investments. They multiply the value of existing platforms. They reduce dependence. They create technical skills. They strengthen crisis credibility. And in moments when Pakistan is asked to mediate, deter, reassure, or bargain, they add weight to diplomacy.[1213]

The policy message is therefore clear: Pakistan does not need to outspend its adversaries to compete. It needs to out-convert spending into usable capability. NCW is the doctrine of that conversion, and the budget is the mechanism. When the budget funds the network, deterrence is engineered. When it does not, procurement becomes spectacle, fleets become brittle, and platform prestige collapses at the first serious encounter with a better system.[12]

Policy takeaways

- The policy debate on defense expenditure should be framed in terms of "capability per rupee spent" rather than "more platforms".
- Pakistan Combat power today and in the future will be depending upon AEW&C, data links, EW, C4ISR, cyber hardening, simulation, and mission-data infrastructure. Therefore, these areas should receive a priority.
- The events of May 2025, the downing of Indian jets in a BVR fight, should be looked at as a lesson in kill-chain economics, not just as a slogan.
- PAC and Pakistan aerospace sustainment base should be looked as an Industrial capacity not just symbolic capacity..
- Create a defence-economics evaluation framework for all major airpower spending.
- Create a protected NCW budget line with clear guardianship, auditability, redundancy and back-up planning, so that the network remains survivable and the funds are not diverted.

Notes and references

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2. Fida Muhammad Khan, Kamra Unseen: The Defense Economics of Pakistan’s Aerospace Industry (Islamabad: Auraq Publications, April 2026), ISBN 978-969-749-376-0, especially the chapters on PAC Kamra, aerospace capability, and “The Network and the Budget: How NCW Turns Spending into Capability.”
4. Reuters, “How Pakistan shot down India’s cutting-edge fighter using Chinese gear,” 2 August 2025.
5. Kamra Unseen frames PAC as an institution through which defense expenditure is translated into capability sustained, skills produced, foreign exchange saved, and export possibilities created.
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13. Karim Khan and Syed Fida Muhammad Khan, “Pakistan’s Role As Bridge Between Rivals In A Fragmented World,” The Friday Times, 11 May 2026.
14. Reuters, “India signs deal for 36 Rafale fighter jets to counter China, Pakistan squadrons,” 23 September 2016. The report placed the 36-aircraft Rafale deal at about 7.8 billion euros / US$8.7 billion.
15. Defense Security Cooperation Agency, “Government of Bahrain - F-16V Aircraft with Support,” Transmittal No. 16-60, 8 September 2017. The possible sale of 19 F-16V aircraft with support was estimated at US$2.785 billion.
16. The redundancy point follows from the same NCW logic: a network that increases capability must also be protected against jamming, cyber attack, degraded communications, and central-command failure.