




**Burn Rate:**  
**Missile and Interceptor Cost**  
**Estimates During the U.S.-Israel-**  
**Iran War**

Ari Cicurel  
*Associate Director of Foreign Policy*

JINSA research shows that the June 13-24 war was likely more expensive for Iran, particularly when measured as a share of its GDP per capita, than for the United States or Israel, suggesting prolonged conflicts would disadvantage Iran. Yet, the heavy use of interceptors along with high costs, slow restocking, and possible performance issues raise concerns for missile defense in any future conflict, whether with Iran, Russia, or China.

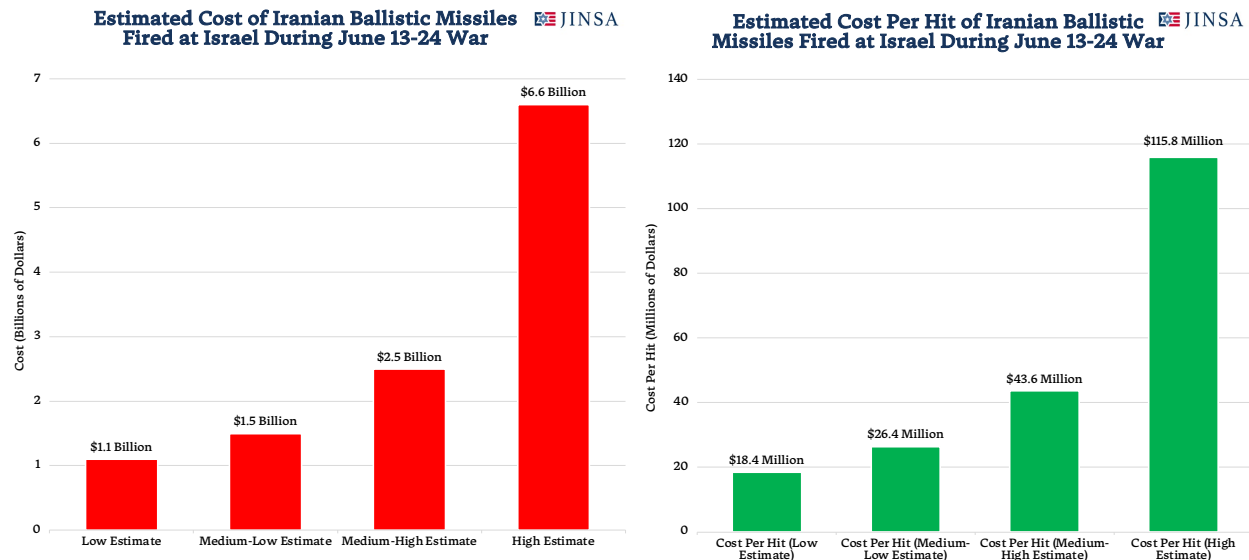
Iran’s missile strikes on Israel and Al Udeid Air Base cost \$1.1–6.6 billion, while U.S. and Israeli air defense interceptors cost them \$1.48–1.58 billion. But the difference in real costs is much starker. Air defense operations saved countless lives and prevented an estimated \$15 billion in property damage, leading to U.S. and Israeli interceptors saving Israel roughly \$13.4–\$13.5 billion. Iran, on the other hand, lost significant missile production and launch capabilities that will be costly to rebuild. In terms of GDP per capita, the conflict cost Iran as much as 93 times more than Israel and 371 times more than the United States.

However, after burning through a large portion of their available interceptors, the United States and Israel both face an urgent need to replenish stockpiles and sharply increase production rates. The U.S. THAAD system accounted for almost half of all interceptions, perhaps because of Israel’s insufficient Arrow interceptor capacity. As a result, the United States used up about 14 percent of all its THAAD interceptors, which would take three to eight years to replenish at current production rates. Iran’s large-scale missile campaign may have revealed vulnerabilities in Israeli and U.S. air defense systems, providing lessons that Iran or other U.S. adversaries could exploit in the future. During the periods where THAAD represented over 60 percent of interceptors used, Iran increased its successful hit rate by one to four percent. At the same time, the U.S. decision to use a large number of critical air defense interceptors showed strong support for Israel and may deter Russian and Chinese aggression against U.S. partners.

|  JINSA | Cost GDP Per Capita | Percent of Stockpile Used                                                   |
|-------------------------------------------------------------------------------------------|---------------------|-----------------------------------------------------------------------------|
| U.S. Defense                                                                              | 14,909%             | 14% of THAAD Interceptors<br>(47.7% of Total Interceptors Used)             |
| Israeli Defense                                                                           | 3,729%-5,593%       | Unknown Percent of Arrow Interceptors<br>(52.3% of Total Interceptors Used) |
| Iranian Attack                                                                            | 220,166%-1,383,451% | 33%-50% of MRBMs                                                            |

- Iran launched 574 medium-range ballistic missiles at Israel during the June 13-24 war, according to JINSA’s [Iran Projectile Tracker](#), with a total cost of between \$1.1-6.6 billion. With Iran hitting populated areas in Israel roughly 57 times, per JINSA data, Iran expended between \$18.4-115 million per successful hit.

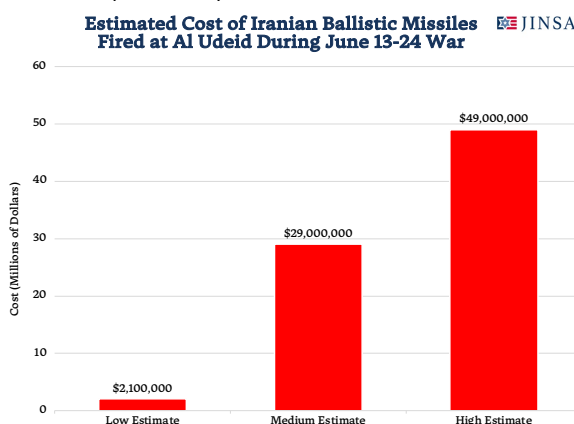
- » JINSA previously [estimated](#) that Iran used 33-55 percent of its medium-range ballistic missile (MRBM) arsenal during the war.



- » The vast majority of these missiles were likely Emad (\$250,000 cost) and Ghadr (\$5 million cost) MRBMs. Iran also likely fired several of its more expensive MRBMs, including the Khorramshahr-4 (\$8 million cost), but the modest number of these more advanced missiles being fired likely had only a minimal impact on the total cost.
- » The cost of Iran's attacks depends on how many of each type of missile it used, which is unknown. However, using assumptions about different possible make-ups of Iran's total missile use, the following low, medium, and high estimates can be made:
  - Two-thirds Emads and one-third Ghadr: total cost of roughly \$1 billion; cost per successful hit of \$18.4 million.
  - Equal number of Emads and Ghadr: total cost of roughly \$1.5 billion; cost per successful hit of \$26.4 million.
  - One-third Emads and two-thirds Ghadr: total cost of roughly \$2.5 billion; cost per successful hit of \$43.6 million.
- » However, Prime Minister Benjamin Netanyahu claimed that Iran's October 2024 attack with 200 MRBMs cost it \$2.3 billion, or roughly \$11.5 million per missile. Applying that estimate to the June 2024 war suggests a cost to Iran of \$6.6 billion, with each successful hit costing \$115 million.
  - This high estimate shows that total cost to Iran may have been much greater than the individual costs of the missiles it fired.
  - Netanyahu's estimate likely also included additional costs beyond the price of an individual missile, including fuel, upkeep, and maintenance costs.
- » The true total cost of Iran's missile fire against Israel is likely higher still, due to the loss of missile launchers and missile production sites. This means that rebuilding its missile capabilities to pre-war status will likely cost Iran far more than the costs estimated here.
  - After Iran launched a missile, Israel would frequently find and destroy the launcher. The cost of Iran's missile launchers remains unknown as does what portion of the roughly 250 launchers that Israel destroyed during the war were hit after having fired a missile. But the significant loss of these launchers only further adds to the total cost of Iran's attacks.

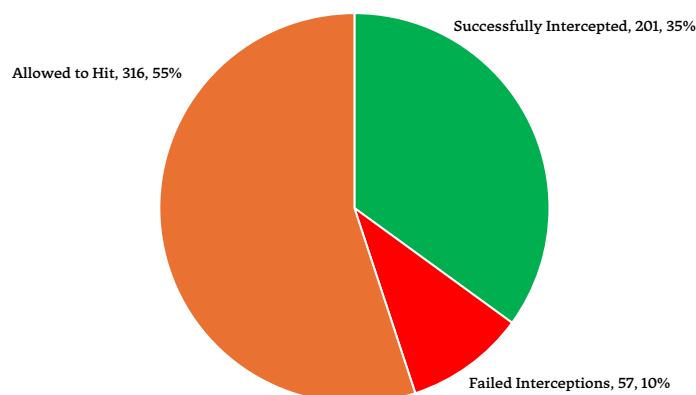
- So, too, does the major loss of missile production capabilities that Iran will have to rebuild before it can begin replenishing its depleted MRBM stockpiles.
- Iran also likely spent between \$2.1-49 million during its attack against U.S. forces at the Al Udeid Air Base on June 23, with only one missile striking the facility. U.S. officials indicated that Iran [launched](#) both short-range ballistic missiles (SRBMs) and MRBMs.

- » If Iran fired only Zolfaghar SRBMs (\$150,000 cost), it would have spent \$2.1 million on the attack.
- » If Iran launched only Fatah-110 SRBMs (2.1 million cost), it would have spent 29.4 million during the attack.
- » If Iran used only Qiam-1 SRBMs (\$3.5 million cost), it would have spent \$49 million during the attack.

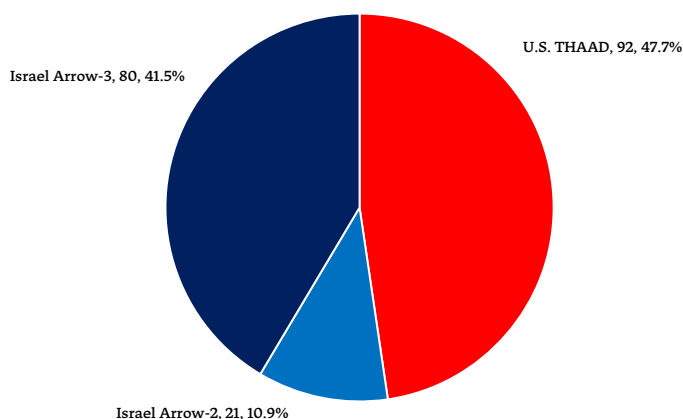


- Based on IDF claims, Israel likely attempted to intercept roughly 258 missiles. Applying this total number of attempted interceptions to the 574 missiles that Iran fired at Israel and 57 hits on populated areas according to JINSA's [Iran Projectile Tracker](#), the United States and Israel successfully neutralized 201 missiles, with 316 landing in unpopulated areas.
- » The Israel Defense Forces (IDF) claimed to intercept [86 percent](#) of Iranian missiles, with 36 hits on populated areas, indicating that it attempted to intercept roughly 258 missiles.
- » It is possible to estimate the number of different interceptors used in the defense of Israel based on analysis of videos from [photographer Zaid Abbadi](#), based in Amman, Jordan. The videos show 225 Iranian missiles targeting Israel and the launch of 82 interceptors. [Researchers identified](#) the interceptors as 9 Arrow-2 (11 percent of interceptors), 34 Arrow-3 (41.5 percent of interceptors), and 39 THAAD interceptors (47.5 percent of interceptors).
- The 225 Iranian missiles shown in Abbadi's videos represented 42.4 percent of the 530 missiles that the IDF indicated neared Israeli territory.

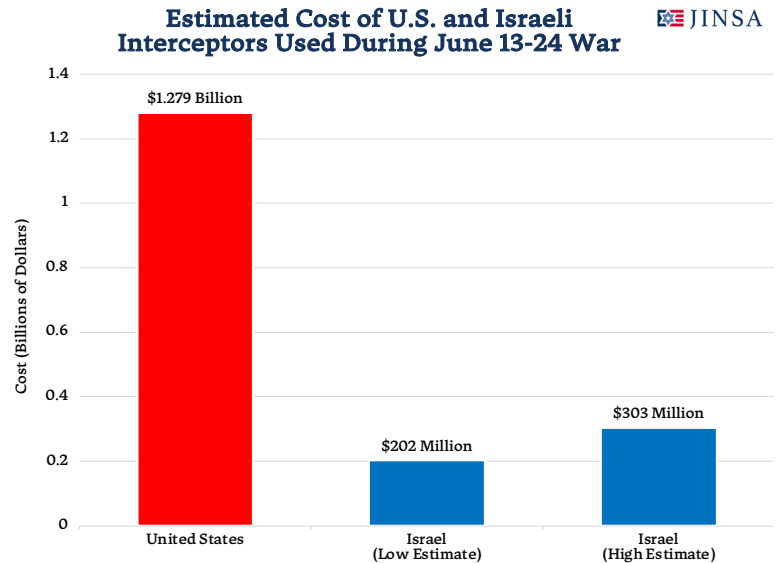
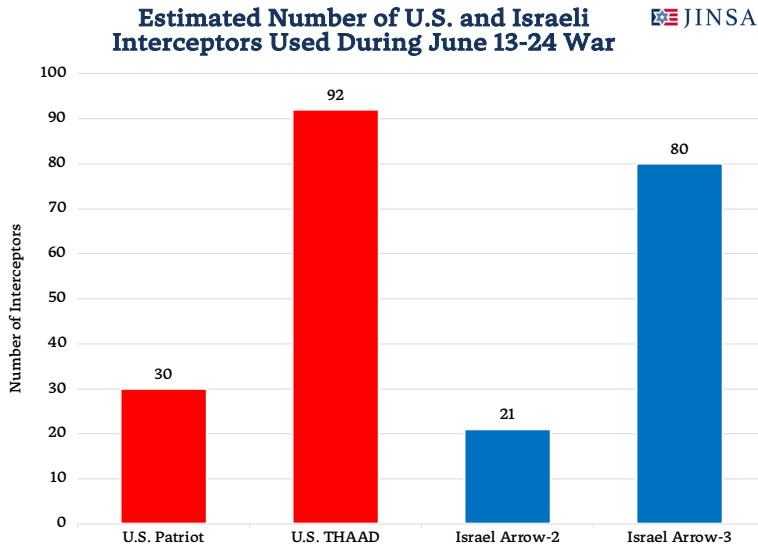
**Estimated Interception and Hit Rate During June 13-24 War** JINSA



**Estimated Share of U.S. and Israeli Interceptors Defending Israel During June 13-24 War** JINSA



- » If the ratio of different interceptors shown in the video is a representative sample of the entire war, then it is possible to extrapolate the following numbers of total interceptor usage:
  - Arrow-2: 21 interceptors;
  - Arrow-3: 80 interceptors; and
  - THAAD: 92 interceptors.



- However, it remains unclear how many SM-2, -3, and -6 interceptors U.S. Navy ships used during the war, which could decrease the total number of THAADs used and adjust the cost estimate.
- Based on estimated 92 THAAD interceptors used during the war, the United States fired roughly 14.3 percent of its total stockpile at a cost of roughly \$1.17 billion. The estimation that THAAD represented roughly half of all interceptors used may have reflected a need to compensate for shortfalls in Israel's Arrow-2 and Arrow-3 inventory. Alternatively, Iran may have deliberately targeted areas designated for THAAD protection if it identified a vulnerability in the platform, prompting a concentrated use of these interceptors.
  - » America's willingness to expend a large share of the arsenal of its most important interceptor sent a clear signal of its support for Israel's defense to Iran. This strong support of a U.S. partner may also reinforce U.S. deterrence against Russia and China.
  - » The United States expended more than a year's worth of THAAD interceptor production. Without changes to production capacity, it could take years to replace them.
    - The 39 THAAD interceptors shown in Abbadi's videos, let alone the estimated 93 total interceptors throughout the war, far surpassed the U.S. annual acquisition rate.
    - The United States will acquire [12 interceptors](#) by the end of this year. The United States [acquired](#) 11 interceptors in 2024 and 18 in 2023.
    - The United States is only set to acquire [25-37](#) THAAD interceptors in fiscal year 2026.
    - At the most recent production rates, each THAAD interceptor costs roughly [\\$12.7 million](#), per the FY2025 Missile Defense Agency budget.

- » The United States had roughly 632 THAAD interceptors before June 13, with approximately 540 now remaining in its arsenal based on JINSA's calculations of interceptor deliveries and use.

- Lockheed Martin delivered 900 THAAD interceptors to the United States and foreign military sales recipients as of January 2025.

- The United States has delivered 192 interceptors to the United Arab Emirates.

- On December 26, 2024, a forward-deployed THAAD battery in Israel [fired](#) an interceptor at a medium-range ballistic missile launched by the Iran-backed Houthi rebels in Yemen. The action marked the first American use of a THAAD interceptor in combat.

- Saudi Arabia [activated](#) its first THAAD battery in February 2025, which likely included roughly 50 interceptors.

- The United States has exhausted roughly 25 interceptors during launch tests.

- » The heavy use of THAAD interceptors and limited production could force the United States to choose between replenishing its own stockpile and fulfilling deliveries to foreign partners.

- Saudi Arabia has [ordered](#) seven THAAD batteries and 360 interceptors.

- Qatar [agreed](#) during President Trump's May 2025 visit to purchase \$42 billion of U.S. military equipment, including THAAD.

- » Based on the number of THAAD interceptors that the United States used during the war, the two THAAD batteries were deployed in Israel with more interceptors than usual.

- A THAAD battery [typically deploys](#) with 95 soldiers, six truck mounted launchers, 48 interceptors (eight per launcher), an Army/Navy Transportable Radar Surveillance and Control Mode 2 (AN/TPY-2) radar, and a Tactical Fire Control/Communications component.

- The two Patriot batteries at the Al Udeid Air Base reportedly used roughly 30 Patriot interceptors against the 14 Iranian ballistic missiles targeting the facility on June 23, costing \$111 million.

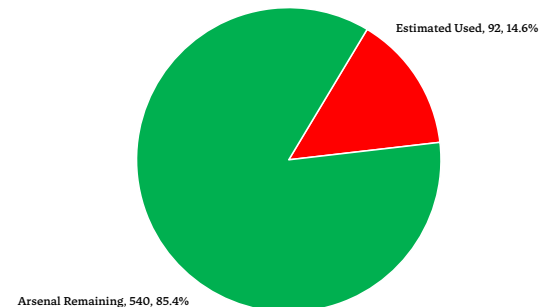
- » Patriot PAC-3 interceptors cost roughly [\\$3.7 million](#) per interceptor.

- » As Chairman of the Joint Chiefs of Staff General Dan Caine [indicated](#) during a press conference on June 26, this was "the largest single Patriot engagement in U.S. military history."

- » Patriot interceptor production is more robust than THAAD production, but the United States is providing a large number of them to Ukraine due to persistent attacks from Russia. It remains unclear how many PAC-3 interceptors the United States still has in its arsenal.

- In October 2024, Lockheed Martin [increased production](#) to 600 interceptors by the end of 2025, up from 500 Patriot PAC-3 interceptors per year in 2024. Lockheed Martin plans to further increase production to 650 by 2027.

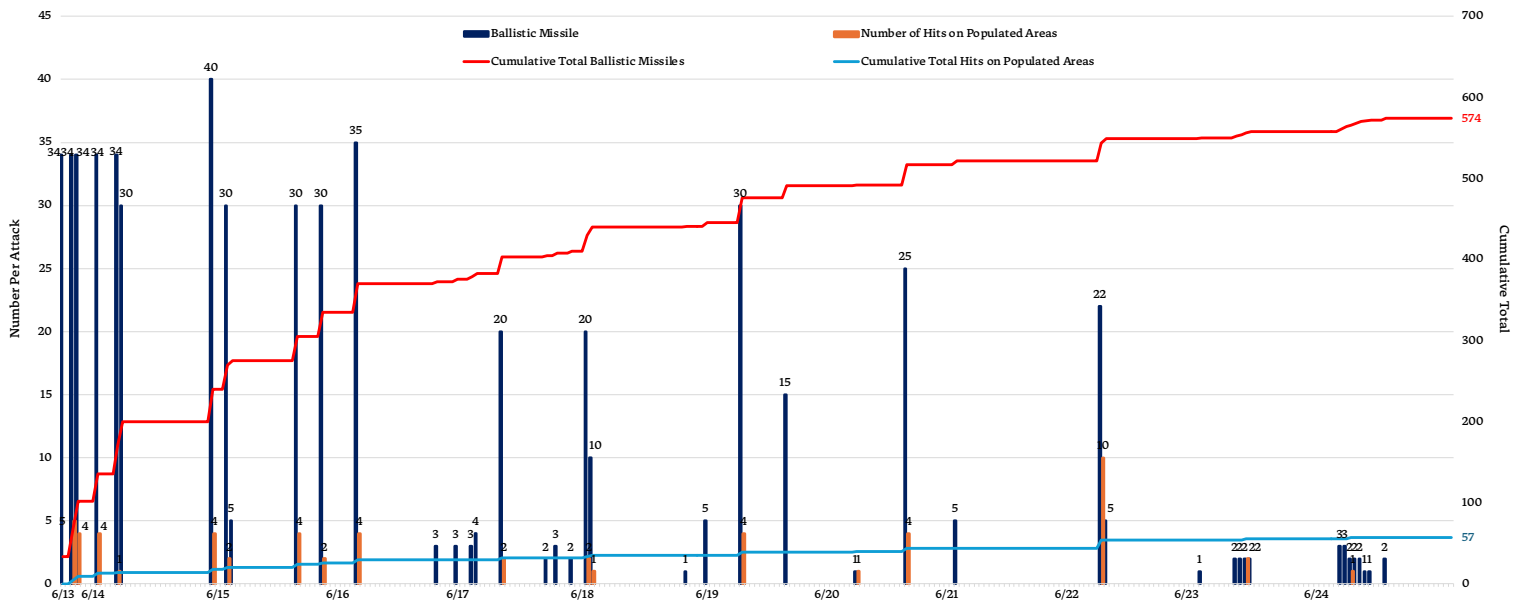
JINSA  
Estimated Use of U.S. THAAD Stockpile  
During June 13-24 War



- Israel used an estimated 21 Arrow-2 interceptors and 80 Arrow-3 interceptors, at a total cost of roughly \$202-303 million.
  - » Arrow 2 and 3 interceptors cost between \$2-3 million. Arrow interceptor production rates remain unclear.
- For nearly two weeks, Israeli and U.S. systems operated at unprecedented tempos, confronting volleys of Iranian ballistic missiles and drones. Despite the persistent threat and the inherent limitations posed by a finite supply of air defense interceptors, both Israel and the United States managed to sustain high interception rates.

### Size and Frequency of Iranian Ballistic Missile Attacks Against Israel

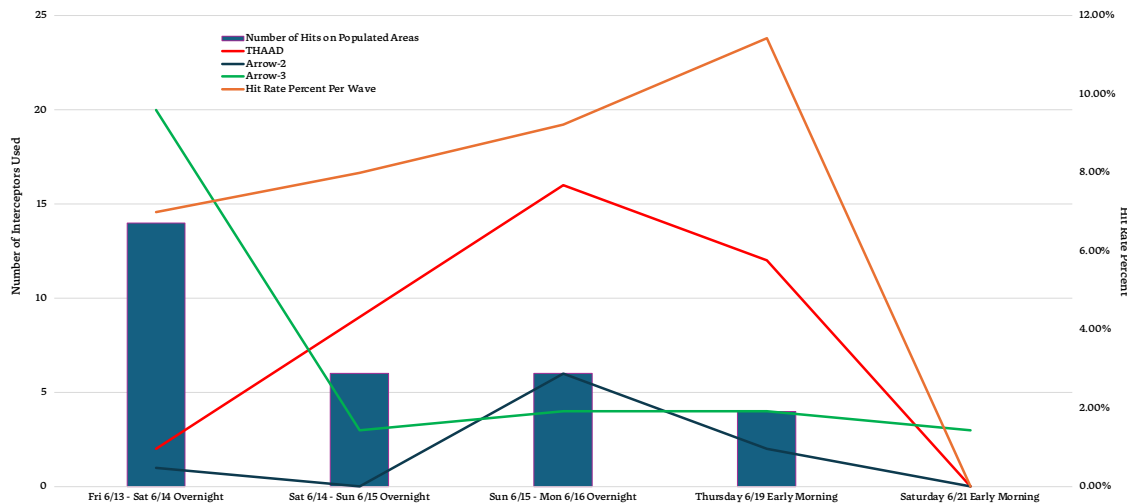
JINSA



- » While the IDF reported 36 impact sites, JINSA's [Iran Projectile Tracker](#), which relies on a combination of news reporting and IDF releases, has detailed as many as 57 Iranian missiles hitting populated areas during the war.
- » The United States intercepted 13 of 14 missiles that Iran launched at Al Udeid, with one missile [damaging](#) a \$15 million communications dome at the facility.
- » However, based on limited available data, the increased use of U.S. THAAD interceptors coincided with an increase in the hit rate percent of Iranian missiles striking Israel.
  - During the periods in Abbadi's videos where THAAD represented over 60 percent of interceptors used, Iran increased its successful hit rate by one to four percent.
  - This suggests potential operational or tactical limitations in the deployment of THAAD systems under sustained attack conditions, possibly due to factors such as interceptor allocation, target saturation, or evolving missile tactics. As interception systems are pushed to their limits, even minor inefficiencies or delays can have significant consequences, highlighting the ongoing challenge of maintaining effective missile defense amidst rapidly shifting threat environments.
  - While periods of waves with video evidence only represent a sample of the total attacks, the seeming correlation between reliance on THAAD interceptors and an increase in Iranian missiles successfully hitting indicates a concern, not only against Iran but potentially in combat against other adversaries, like Russia and China.

## U.S. and Israeli Interceptors Used During 12-Day War and Iranian Ballistic Missile Hits in Israel

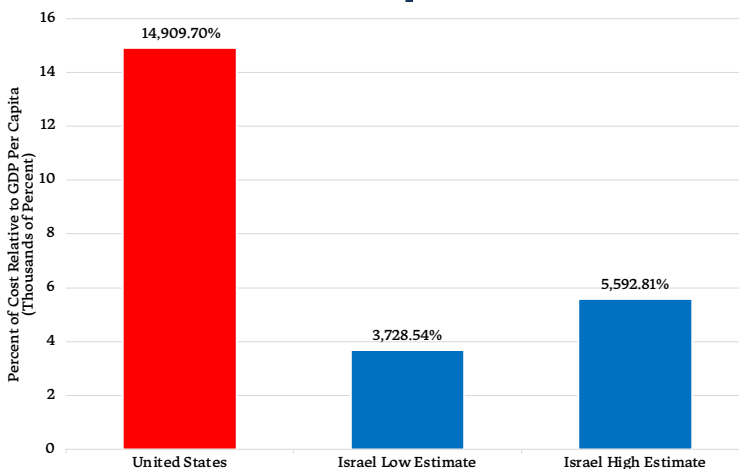
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- When looking at the costs relative to each country's respective GDP per capita, the attack was substantially more costly for Iran than the United States or Israel. Iran spent 14-92 percent more of its GDP per capita than the United States and 39-371 times as much of its GDP per capita than Israel.
  - During the attack, Iran spent about 220,000 to 1.38 million percent of its GDP per capita, while the U.S. spent around 15,000 percent, and Israel spent between 3,700-5,900 percent during the June 13-24 war.
    - The U.S. GDP in 2024 was [\\$29.18 trillion](#) and GDP per capita was [\\$85,809.90](#).
    - Israel's GDP in 2024 was [\\$540.38 billion](#) and GDP per capita was [\\$54,176.70](#).
    - Iran's GDP in 2024 was [\\$436.91 billion](#) and GDP per capita was [\\$4,771.40](#).
  - When considering that Israel's Ministry of Defense claimed the interceptions of Iranian missiles [saved](#) roughly \$15 billion in property damage in Israel, U.S. and Israeli expenditure of interceptors saved Israel between \$13.42 billion and \$13.52 billion.

### U.S. and Israel Interceptor Cost Relative to GDP Per Capita

JINSA



### Iran Ballistic Missile Cost Relative to GDP Per Capita

JINSA

