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SINGAPORE AIRSHOW:

The Joint Strike Fighter and the Asian Arms Market

By Richard A. Bitzinger

Synopsis

As the Singapore Airshow approaches, interest in the future global fighter market is growing. The F-35 Joint Strike Fighter (JSF) is perhaps the favoured competitor in this market, but it also faces cost-benefit disadvantages that give other fighter jets an opening.

Commentary

AS THE 2014 Singapore Airshow approaches, there is an upsurge of speculation surrounding the modernisation of regional air forces. In particular, there is much interest in the likely future acquisitions of new combat aircraft. Nearly every air force in Asia anticipates buying new fighter jets over the next decade, and every one of them wants to get the best fighter they can afford.

The options are numerous – the French *Rafale*, the Swedish *Gripen*, the Russian Su-30, to name but a few – but the standout fighter to beat has got to be the US-built F-35 Joint Strike Fighter (JSF). In almost any fighter acquisition competition that includes the JSF, it holds a tremendous advantage over its rivals; more often than not, it is the F-35's contest to lose.

The only fifth-generation fighter

The JSF is currently the only “fifth-generation” fighter being offered on the global arms market. All other fighters on the market are, at best, “fourth-generation-plus” aircraft, while other so-called fifth-generation fighters, such as the Russian T-50 or the Chinese J-31 are still under development. The F-35 is a truly amazing aircraft: a highly stealthy, multi-role combat fighter with advanced avionics, sensors, and weaponry that put it on the cutting-edge of the network-centric “revolution in military affairs”.

The JSF is being developed and built under a unique multinational programme led by the United States and involving ten partnering countries, including Singapore (as a Level 4, or “Security Cooperative Participant,” partner). Partnering nations have invested a total of more than US\$5 billion into the plane's development phase, about 20 percent of total R&D costs. In return, they are allowed to competitively bid to produce components and subsystems for the JSF, and they can go to the head of the queue to buy the JSF, should they decide to do so.

So far, six partnering countries – the United States, United Kingdom, Netherlands, Australia, Israel, and Italy –

along with two Asian countries – Japan and South Korea – have either signed contracts for the F-35 or announced their intentions buy the aircraft. At the same time, Canada, Denmark, Norway, and Turkey are likely to buy the JSF. Singapore is believed to be in the market for up to 100 JSFs.

To date, every time the JSF has competed for a fighter contract, it has bested its rivals. It trounced the *Gripen* in Norway and the F-15 and Eurofighter *Typhoon* in South Korea. It was Japan's only clear choice for a fifth-generation aircraft to supply its air defence forces.

Can it keep up the winning streak?

The question is, can it continue its winning streak? While the JSF is the most advanced fighter jet available on the global arms market, it also faces many challenges when it comes to dominating export sales, especially to Asia.

In the first place, the JSF is expensive. Richard Aboulafia, an aerospace analyst with the consulting firm Teal Group, estimates that the cost of the F-35 approaches US\$125 million (S\$160 million) per plane. This compares to roughly US\$35 million to US\$50 million each for a Swedish *Gripen* or a US F-16. Aboulafia has noted that only seven countries have ever bought a fighter jet from an overseas supplier that cost more than US\$65 million each.

Consequently, few countries may be able to afford the JSF. Japan, for example, is already considering delaying its purchase of the F-35 due to costs growth. However, while it and most currently anticipated F-35 customers will likely follow through on their acquisition plans, it is much less likely that other air forces, particularly those in Southeast Asia, will even consider the JSF, given the sticker shock. Indonesia, Malaysia, and Thailand, for example, are more likely to buy *Gripen*, Su-30, or used F-16s.

Still a risky venture?

In addition, the F-35 is still a highly risky endeavour. According to an article in last September's issue of *Vanity Fair*, the JSF programme is at least seven years behind schedule and still striving to overcome technical challenges, particularly in its software and its helmet-mounted display. Development costs were also driven up by the US Marine's requirement for a vertical-lift version of the JSF. Nevertheless, under the rubric of "concurrent development," the US Air Force is already taking delivery of its first F-35s, even though it has not been fully flight-tested.

Admittedly, the F-35 is a much more capable plane than any other fighter currently on the market, particularly in the area of stealth and sensor fusion. But how many air forces really require such capacities, given the costs and the technological unknowns? While the F-35 will likely dominate the high-end fighter market for decades to come, the market remains open to less-expensive, if slightly less-capable, planes. The JSF might be the case of perfection being the enemy of good enough.

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