

Question mark over need for manned jets

Bernard F.W. Loo

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On May 7, the Republic of Singapore Air Force (RSAF) received its first four F-15SG multi-role combat aircraft. The addition of this new air combat platform significantly enhances the combat potential of what is already South-east Asia's most well-equipped and well-trained air force.

The F-15 in all its variants has an enviable combat record: Not a single aircraft has ever been defeated by any other platform.

In total, the F-15 had a 104 to 0 kill record up to last year, and only two F-15s have ever been shot down - by ground-based anti-aircraft fire. In terms of pure technical specifications, the Russian MiG-29 Fulcrum and the Su-30 Flanker-C may be superior platforms. However, combat power can never be measured in terms of technical specifications alone. Neither the MiG-29 nor the Su-30 has the F-15's combat record. During the first Iraq war, the United States Air Force's (USAF) F-15s accounted for five MiG-29 kills.

But is the F-15SG likely to be the RSAF's last manned air combat platform? Three sets of issues are germane: the ever-increasing costs of new air combat systems; the changing strategic environment and its ramifications for air combat; and the increasing availability of technologically reliable unmanned technologies.

The F-15 C/D variant - until recently the backbone of the USAF - cost US\$30 million (S\$44 million) each. The F-15E, the multi-role variant, costs US\$31 million. While the cost of the F-15SG remains classified, the original contract for 12 platforms cost US\$1 billion, although this was likely a package deal including training, avionics and other combat systems. Nevertheless, it is clear that the F-15SG is the RSAF's most expensive acquisition to date.

Meanwhile, the costs of air combat systems are continuing to escalate. From 2001 to 2007, the cost of the F-35 Joint Strike Fighter programme, in which Singapore is a participant, jumped about 43 per cent. In 2001, the F-35 was estimated to cost US\$79 million per platform. By this year, the figure had jumped to US\$122 million. Recently, US Defence Secretary Robert Gates reportedly said that the eventual cost may be US\$373 million, though economies of scale might reduce the cost of each platform to around US\$200 million. It is difficult to imagine the RSAF purchasing more than a handful of this platform.

If the escalating costs of air combat systems were not enough, the RSAF may have to come to terms with the possibility that the strategic environment in which it operates may change. Various military thinkers have argued that large-scale organised wars may not totally disappear, but will likely become so rare in occurrence as to be statistically irrelevant.

Of course, these arguments about the changing nature of war in the 21st century are not uncontested. Prominent strategist Colin Gray, for example, has argued that violence and conflict - and yes, large-scale organised conflict - will remain part and parcel of the human existence. The evidence shows that few strategic planners and policymakers in the world are prepared to conclude that large-scale warfare has totally disappeared from the human condition.

New Zealand and Denmark are two countries that have acted on that premise - New Zealand having disbanded the combat air wing from its air force, and Denmark having

decided that its armed forces will now prepare exclusively to support Operations Other Than War (OOTW) for the United Nations or Nato. Most other countries, however, retain armed forces that prepare primarily - if not exclusively - for conventional war operations.

That most countries have not drastically reconfigured their armed forces from conventional operations to OOTW cannot, by itself, be regarded as sufficient justification for this apparent stasis. The arguments for and against a new strategic environment and a new security agenda are equally persuasive. The decisions policymakers make to retain a conventional war fighting capability in their respective armed forces is ultimately a reflection of their deep-seated beliefs about the nature of international politics.

In the event, however, that policymakers do decide to reconfigure their armed forces for OOTW, combat air platforms such as the F-15 or F-35 would become hugely expensive white elephants, strategically irrelevant to the challenges of OOTW.

Furthermore, there are alternative aerial technologies that are becoming technologically reliable and relatively cheap. Unmanned aerial vehicles - and, for that matter, robotics in general - are becoming an increasingly pervasive element of the contemporary battlespace.

The MQ-1 Predator costs approximately US\$4.5 million and is capable of firing Hellfire air-to-surface missiles. The MQ-9 Reaper carries significantly more ordnance than the Predator and costs approximately US\$6.5 million. The RQ-4 Global Hawk is rather more expensive, costing about US\$35 million. These platforms have sufficient flexibility to adapt to OOTW.

The standard defence of the manned aerial combat platform has always been the need to have a human in the decision loop. A pilot brings a level of situational awareness, decision-making flexibility and adaptability that current unmanned systems simply cannot provide.

But this shortcoming of the unmanned system is unlikely to be a permanent feature. Eventually, unmanned systems will be able to provide the same level of situational awareness as manned combat systems. And losing an unmanned combat system behind enemy lines will not be as politically costly as losing a pilot behind enemy lines. This is the lesson of the U-2 incident of May 1960, when a U-2 spy aircraft piloted by Francis Gary Powers was shot down over Soviet airspace.

The RSAF will probably face a challenge posed by the intersection of these three conditions: the escalating costs of manned aerial combat systems, the widening security agenda that the Singapore Armed Forces will probably have to take on board, and the increasing availability of cheaper unmanned technologies.

Which path the RSAF takes will, of course, be a political decision.

The writer is an Associate Professor at the S. Rajaratnam School of International Studies, Nanyang Technological University.