

Question

Topic: Joint Strike Fighter

Pages: 3

Sources: 7

Format: APA

Deadline: 1 day 5 hours

Instructions:

Provide a critical analysis (1,000+ words) of the design of the Joint Strike Fighter.

Use at least six references in your report.

Provide an executive summary of four pages exactly.

Format should be:

- Background, context, perspective, history, enabling technological advances, and so forth
- Design goals and top level requirements
- Cost, materials, technical, and environmental constraints
- Trades made to achieve selected optimum
- Final design effectiveness evaluation, strengths, and weaknesses
- Lessons learned applicable to today.

Joint Strike Fighter

Name

Institution

Course

Due date:

Joint Strike Fighter

The Joint Strike Fighter is described as the most expensive military program in the entire globe with the total costs being estimated to be more than 1 trillion dollars. The fighter was publicized to be one that could nearly carry out everything that the United States military desired whereby it would be serving the Air Force, Marine Corps as well as the Navy plus even the Britain's Royal Air Force and Royal Navy (Bolkcom, 2003). Initially, it was marketed to be a cost-efficient, powerful numerous-role fighter jet largely better than anything that future enemies could manufacture in the coming two decades since its inception in the late 1980s. However, none of these things have been attained almost three decades later. Notably, despite the Pentagon declaring that the program was 'too big to fail,' doubts continue on the economic viability of the project as the United States continues to throw huge sums of money at it (Gertler, 2009).

Most of the present day U.S. fighter inventory comprises of aircraft that was created and produced in the 1970s. As a result, service-life exhaustion along with growing threats has led to all the three services gradually withdrawing the present fighter aircraft. Continually, the British Harrier navy that initially flew more than 30 years ago is being faced with comparable concerns. The Joint Strike Fighter was conceived with the target of replacing the aging aircraft, while at the same time maintaining the expanding needs of present-day tactical fighter (Hess, & Fila, 2002). Precisely, the United States Air Force will utilize it as a multi-role aircraft to substitute the F-16 as well as A-10 while also complementing the F-22. The U.S. Navy will on the other hand utilize it as a "first day of war" strike fighter jet to supplement the F/A-18E/F. The Joint Strike Fighter will be utilized for the Short Take-off along with Vertical Landing (STOVL) F-35 variant to substitute the AV-8B and F/A-18A/C/D by the Marine Corps. In the United Kingdom, the Royal

Navy along with Royal Air Force to substitute the Sea Harrier plus the Harrier GR7 (Kapstein, 2004).

In a recent Pentagon report, the Joint Strike Fighter was described to have 276 deficiencies in combat performance which are termed as essential to correct in Block 3F. Nonetheless, in the 3FR6 where there were attempted corrections of the deficiencies, less than half of them were addressed. Continually, in addition to the flaws there are more that keep popping up at a fast rate of nearly 20 every month. A review by (Gertler, 2009), implied that the operational performance of the Joint Strike Fighter was a complete joke, whereby it has overheating problems along with cyber security weaknesses that could see the data being easily compromised. A study carried out by the RAND Corporation in the year 2013 showed that if the Air Force, Marine Corps and Navy had basically planned and developed distinct and additionally specialized aircraft to meet their certain operational needs it would have been quite cheaper (Birkler, Graser, Arena, Cook, & Lee, 2001).

When in combat, the biggest difference between losing and winning is frequently not that big with the first meaning death too often. It is as a result that the Pentagon looks forward to presenting soldiers with the best probable apparatuses. The best apparatuses are described as those with the capability to go into certain missions and kinds of combat. Due to this, the defense planners sought for ways they would economize while also achieving more tasks with the Joint Strike Fighter. The fighter aircraft ought to have enough capability to fight in both and air and ground targets. In scenarios where there are trade-offs planned to take place, the designers of the Joint Strike Fighter focused on aerial combat strength, lessening air to ground capabilities. Through the Joint Strike Fighter the designers looked towards formulating an airplane that failed to either carry any of the missions in a remarkable way. The way the designers of the plane

presented it is an inelegant jack-of-all-trades, though master of none. This has been all done with great cost in the past and is continuing in the future.

The aircraft was termed as a state of the art plane meant for all the branches of the United States military which was a huge strength. Additionally, it had the goal of overpowering enemies with technological supremacy. The jet would have the ability to evade radar as well as escape sophisticated anti-aircraft missiles while presenting pilots with an enhanced image of enemy threats coming towards them. Nonetheless, even with the initial promises that the all in one plane would save the money of the populace, the costs have continued to veer off the initial budget. This has been a huge challenge for the fighter jet. The technology that is used in the Joint Strike Fighter as well as other weapons is continually multifaceted and politics have a tendency to worsen the concerns (Thomas, 2015). To hem in congressional backing, the Pentagon continually begins creating the weapons prior to the completion of testing. Cutting financial backing when the program is at the middle point could push cost upwards in the long run in the case it lessens the economies of scale in the manufacturing industries (Thomas, 2015).

Conclusively, the Joint Strike Fighter program is still years away from being able to act in any way as regards helping the national defense (Sullivan, 2016). All the concerns that are continually raised are elements that need to be addressed and discussed all over the country from the populace, along with the decision makers. This is due to the fact that the country cannot afford another 1.4 trillion dollars mistake which would certainly lead to more harm than good to the national security. From the fact that the Joint Strike Fighter has yet to basically perform even the basic combat tasks that were initially utilized to sell the program to the American populace, continuous funding without critical review of the project would be unwise. The Congress ought to inspect in a careful manner any other proposals concerning production since only the

contractors are the ones continually benefiting from presenting airplanes that are not able to fight.

References

- Birkler, J., Graser, J. C., Arena, M. V., Cook, C. R., & Lee, G. (2001). *Assessing Competitive Strategies for the Joint Strike Fighter: Opportunities and Options* (No. RAND-MR-1362.0-OSD/JSF). RAND National Defense Research Inst Santa Monica Ca.
- Bolkcom, C. (2003, July). Joint Strike Fighter (JSF) Program: Background, Status, and Issues. Library Of Congress Washington Dc Congressional Research Service.
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- Sullivan, M. J. (2016). *F-35 Joint Strike Fighter: Preliminary Observations on Program Progress*. US Government Accountability Office Washington United States.
- Thomas, C. R. (2015). Learning Like Lightning: Lessons From JSF F-35 Sustainment Activities. *Journal of Corporate Accounting & Finance*, 27(1), 55-61.