

5

Multiple Trade Off Analysis

5.1 Introduction

In the design of new products, it is well known that the most appealing product is also usually the least profitable product to produce.

The most appealing SBJ that could be produced in the current market environment would be a supersonic version of the G5 or Global Express. A 6000nm, Mach 2.0 aircraft with a G5 sized cabin and field performance equal to the current subsonic aircraft priced at \$40 million to \$50 million would create a very large market demand. It would also probably be uneconomic or technologically impossible to produce.

Therefore, the design of the SBJ is a matter of trade-offs between acceptable price, performance and profitability. This chapter examines the market response to different possible SBJ concepts and the market sensitivity to changes in the price/performance ratios of an SBJ.

5.2 Trade Off Study Design

SBJ Design Concepts

In order to determine the market sensitivity to different trade-offs or combinations of price and performance, operators were presented with four hypothetical SBJ concepts. Operators were then asked to rank them in order of preference. The 4 designs were carefully designed to make it difficult for operators to choose between them, thus drawing out their perceptual map in a simulated purchase decision.

The four concepts presented are shown below in Table 8.

TABLE 8

SBJ CONCEPTS PRESENTED

	RANGE	SPEED	PRICE	BFL	CABIN
Concept 1	6000nm	M 2.0	US\$100M	8000 ft	Gulfstream 4
Concept 2	4500nm	M 1.8	US\$70M	7000 ft	Gulfstream 2
Concept 3	4000nm	M 1.8	US\$60M	6000 ft	Falcon 50
Concept 4	5000nm	M 1.5	US\$65M	6000 ft	Falcon 50

Discussion

The price/ performance parameters shown above were chosen to determine the relative importance to operators of each factor.

It was also found during initial testing that if Concept 3 and 4 were given the same price of either \$60M or \$65M each, Concept 4 was always chosen in preference to Concept 3. The price of Concept 3 was reduced below that of Concept 4 to make comparison of these two choices more meaningful.