

## **Impact of standing cabin concept on takeoff gross weight**

### **ABSTRACT**

The market competition between airlines today has basically changed towards the affordability of their air transportation service. In other words, airlines are competing to lower their ticket prices as to capture the high demands from the leisure and business travellers, who are also price-sensitive customers, while still maintaining a reasonable profits margin. Theoretically, by having more passengers onboard the aircraft, the flight ticket price can be lowered since the imposed operational costs can be shared by more passengers per flight. To achieve this, an idea of standing cabin, where passengers are transported in the aircraft cabin in their upright position, has been proposed to reduce operational flight cost per passenger. However, this condition will only work if the resultant operational costs can be maintained at the same level as in the conventional cabin arrangement or increase at a lower rate than the additional number of passengers. Since operational costs of an aircraft can be directly related to its weight, this study is aimed to highlight the impact of standing cabin concept on the takeoff gross weight as to verify the sought-after potential benefit of a lower cost per passenger.

**Keyword:** Vertical seat; Standing cabin; Aircraft cabin; Transport aircraft