Suppose the prize is on the center box and the following are the three scenarios



The host can reveal either the left or right boxes and offer a switch If I switch I lose, else I win



The host can reveal either the center or right box and offer a switch with the unrevealed one If I switch I win, else I lose



The host can reveal either the left or center box and offer a switch with the unrevealed one If I switch I win, else I lose

B = Picking a box with the prize S = Switching wins the puzzle

$$P(B) = 1/3$$

 $P(\neg B) = 2/3$

So probability of picking a box which has no cash is higher

$$P(S) = P(S/B) * P(B) + P(S/\neg B) * P(\neg B)$$

$$P(S/B) = 0$$

$$P(S/\neg B) = 1$$

$$P(S) = 1 * 2/3 = 2/3$$

$$P(-S) = 1/3$$

It is better to switch