

# **Red or Blue: How Recommended Products Influence Consumers' Willingness-to-Pay**

## **ABSTRACT**

This research discusses how two approaches of online recommendation, complement-based recommendation and substitute-based recommendation, influence consumers' perception of benefit, monetary sacrifice and effort while adding red or blue background, and then influence consumers' willingness-to-pay. This research would explore the influence of background colors on customers' online purchasing decisions. Specifically, will consumers' willingness-to-purchase be different between the two displays of complement-based recommendation (bundle vs. separate product) when the background color varies (red versus blue)? On the other hand, when we visit a substitute-based store, would we buy the different substitutes or similar substitutes when the background color varies?

In study one, the display of complement-based recommendation has been categorized into complement-based bundle and separate products. This results indicated that (1) complement-based bundle would have been perceived as more benefit when adding blue color rather than adding red color, separate product would have been perceived as more benefit when adding red color rather than adding blue

color and (2) complement-based bundle would have been perceived as less sacrifice when adding red color rather than adding blue color, separate product would have been perceived as less sacrifice when adding blue color rather than adding red color as well as (3) complement-based bundle would have been perceived as less effort when adding red color rather than blue color, separate products would have been perceived as less effort when adding blue color rather than adding red color.

In study two, substitute-based recommendation was further divided into different substitutes and similar substitutes. The results indicated that (1) different substitutes would have been perceived as more benefit when adding blue color rather than adding red color, similar substitutes would have been perceived as more benefit when adding red color rather than blue color and (2) different substitutes would have been perceived as more sacrifice when adding blue color rather than adding red color, similar substitutes would have been perceived as more sacrifice when adding red color rather than blue color as well as (3) different substitutes would have been perceived as more effort when adding blue color rather than adding red color, and similar substitutes would have been perceived as more effort when adding red color rather than blue color. Besides, we would have tested that perceived benefit and perceived effort would have positively affected consumers' willingness-to-pay; on the other hand, perceived sacrifice would have negatively affected consumers'

willingness-to-pay.

In study one, complement-based-bundle recommendation would be perceived more benefit when using blue color rather than using red color. On the contrary, complement-based separate-products recommendation would be perceived as more benefit when using red color rather than blue color. If e-tailers would like to use complements to promote their products' high quality, maybe they could consider using blue color and putting the dominant product and a complement together or using red color and separating the dominant product from complements.

In study two, different substitutes would be perceived as more benefit when using blue color rather than using red color. Furthermore, different substitutes would also be perceived more effort when using blue color rather than red color. Therefore, different substitutes are suitable for blue color if marketing manager would like to promote their products' qualities. In addition, exposure to a blue color cue, consumers would consider a different substitute perceived as more effort than a similar substitute. Therefore, e-tailers could use blue color to enhance consumers' attentions to compare the differences between an original product and a substitute, and then different substitutes has higher opportunities to be selected.

Additionally, perceived benefit and perceived effort would have positively influenced consumers' willingness-to-pay; while perceived sacrifice would have

negatively influenced consumers' willingness-to-pay. If company would like to increase consumers' willingness-to-purchase, they might adopt complement-base bundle and different substitutes by using blue color as well as adopt individual products and similar substitutes by using red color. Our research should help marketing manager choose appropriate colors for particular approaches of online recommendation.

## 中文摘要

此研究探討兩種線上推薦——互補性基礎推薦及替代性基礎推薦，加入兩種背景顏色——紅色和藍色，會如何影響消費者的感知有利性、感知價格犧牲以及感知努力性，進而影響消費者的購買意願。實驗一將互補性基礎推薦區分成互補性基礎組合以及互補性基礎分開產品。此實驗測試〈一〉互補性基礎組合加入藍色背景比加入紅色背景，消費者感知更多有利性；而互補性基礎分開產品加入紅色背景比加入藍色背景，消費者感知更多有利性。〈二〉互補性基礎組合加入紅色背景比加入藍色背景，消費者感知更少價格犧牲；而互補性基礎分開產品加入藍色背景比加入紅色背景，消費者感知更少價格犧牲。〈三〉互補性基礎組合加入紅色背景比加入藍色背景，消費者感知更少努力性；而互補性基礎分開產品加入藍色背景比加入紅色背景，消費者感知更少努力性。

實驗二將替代性基礎推薦分成不同性替代品以及相似性替代品。此實驗測試〈一〉不同性替代品加入藍色背景比加入紅色背景，消費者感知更多有利性；而相似性替代品加入紅色背景比加入藍色背景，消費者感知更多有利性。〈二〉不同性替代品加入藍色背景比加入紅色背景，消費者感知更多價格犧牲；而相似性替代品加入紅色背景比加入藍色背景，消費者感知更多價格犧牲。〈三〉不同性替代品加入藍色背景比加入紅色背景，消費者感知更多努力性；而相似性替代品加入紅色背景比加入藍色背景，消費者感知更多努力性。最後，應用迴歸分析檢驗感知有利性和感知努力性會正向影響消費者的購買意

願，而感知價格犧牲會負向影響消費者的購買意願。

從此研究中發現，互補性基礎組合使用藍色背景比使用紅色背景，消費者感知更多有利性；而互補性基礎分開產品使用紅色背景比使用藍色背景，消費者感知更多有利性。不同性替代品使用藍色背景比使用紅色背景，消費者感知更多有利性與努力性。最後，感知有利性與感知努力性會正向影響消費者的購買意願，而感知價格犧牲則會負向影響消費者的購買意願。