The importance of tourism to the economies of several countries worldwide is undeniable. For countries such as Portugal, Spain and France, the importance of tourism is quite relevant in its Gross Domestic Product and job creation. In this sense, the income from tourism in these countries helps to achieve a sustainable balanced growth. In this context, to follow a strong focus on Tourism Marketing emerges as a paradigm shared by the leaders in terms of international tourism incomes. Consequently, following a policy of Tourism Marketing requires precise knowledge of the needs and preferences of tourists in order to optimally guide the strategies undertaken by governments and organizations responsible for the management of tourism resources (natural, human or infrastructure). Thus, the main objective of the present study is to illustrate the advantages of applying multivariate techniques, in this case, the Cluster Analysis in two phases. Therefore, the authors performed a post hoc segmentation based on the preferences of the Spanish tourists. The results show the existence of 5 clusters: the Culture Seekers – tourists that prefer destinations with high cultural offer - Culture Seekers oriented by Low Prices – the same as the last one, but with lower prices - Sun and Tranquility Seekers, the ones who prefer destinations with Sun and Tranquility, Sun and Night Lovers that prefer destinations with sun and high offer of night fun, Night Lovers oriented by Low Prices, the same as the last one but they oriented their choices by lower prices.

KEY WORDS: tourism marketing, post hoc segmentation, cluster analysis, preferences.