ARMG Publishing "Thinking ahead"

SocioEconomic Challenges, Volume 3, Issue 3, 2019
ISSN (print) – 2520-6621, ISSN (online) – 2520-6214

Impact of Mediterranean Climatic factors in Algarve on loyalty over International Tourist (Case study of Algarve, Portugal)

https://doi.org/10.21272/sec.3(3).21-29.2019

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Abstract

Weather and climate affect all living organisms that inhabit our planet. At the same time, weather and climate influence a person as a biological being (on his or her well-being), as well as on most branches of his or her economic activity. The tourism sector (and especially some types of tourism) is among the most dependent on the weather and climate among human activities. The customer loyalty plays a vital role within the tourism and hospitality industry. It is very important to make sure the customers are satisfied and remain as loyal as possible, because the loyal customers work as a good promotion tool as they spread the WoM (word of mouth) within their friends, family, relatives and others. On the contrary, not being satisfied to the service or product may translate into a negative feedback, which can lead to a bad image for the business of a certain destination. The main purpose of this study is to identify the variables that are significant to explain loyalty to Algarve, as a touristic destination in terms of the climatic factors.

Here, in this study, one tries to study the relation between meteorological factors and level of loyalty of tourists. The definition of climate requires a long-term duration (almost a year). Given the fact that most of the visiting tourist are not staying in any destination that long, in this study, the chosen sample group were international tourist to Algarve, Portugal. In relation to process of data gathering for this study, a number of 70 international tourist aged between 30-40 years old were interviewed and asked several questions relating to the Mediterranean climate and its impacts on their loyalty over a particular destination (In this case, Algarve). According to the research, it is found that the key factors that prove the loyalty of international tourists to the Algarve are comfortable temperature, sunny days and humidity.

Keywords: climate, humidity, loyalty, temperature, international tourist, sunny days.

JEL Classification: L91, Z32.

Cite as: Rahimipordanjani, M., Khan, M.Y.H., Rebelo, E. (2019). Impact of Mediterranean Climatic factors in Algarve on loyalty over International Tourist (Case study of Algarve, Portugal). *SocioEconomic Challenges*, *3*(2), 21-29. https://doi.org/10.21272/sec.3(3).21-29.2019.

Introduction

For the Portuguese economy, tourism can easily be defined as key area and this country is receiving more than ten million tourists in the most recent years which is helping the country earning over 10% of the entire GDP. The industry is not only growing solid economical platform but also helping the employment market by creating positive vibe. Portugal has all which is needed to make the destination so favorable to the tourists including better infrastructure, climate, offering good price and marketing, safety and good local hospitality. A number of studies identify that knowing which factors increase tourist loyalty is valuable information for tourism marketers and managers to deal with the upcoming tourists (Flavian et al., 2001). The customer loyalty

plays a vital role within the Hospitality and Tourism industry. It is very important to make sure the customers are satisfied and remain as loyal as possible (Bowen & Shoemaker, 1998).

On one hand, it helps the business to have the same customers once and once again, in the future; on the other hand, loyal customers work as a good promotion tool as they spread the WoM (Word of Mouth) within their friends, family, relatives and others (Liu & Auyong, 2008). Up to 60% of sales to new customers could be attributed to WOM referrals (Reichheld & Sasser, 1990).

Literature Review

Weather is the day to day condition of the atmosphere. This includes temperature, rainfall and wind. Climate is the average weather conditions of a place, usually measured over one year. This includes temperature and rainfall. Climate is derived from the Greek word Klima, "slope', 'zone' from Klinien 'to slope', the term originally denoted a zone of the earth between two lines of latitude, then any region considered with references to its atmospheric conditions (Oxford Dictionaries, 2014). Climate is a prevailing atmosphere or environment over a long period of time usually about or over thirty years-thirty-five years.

Climate and weather are widely recognized attributes that play important roles in tourism (Buzinde, Manuel-Navarrete, Kerstetter, & Redclift, 2010; de Freitas, 2001; Gössling, Bredberg, Randow, Sandström, & Svensson, 2006; Smith, 1993). Climate and weather are key ingredients of a destination's geography: they influence tourist flows, have significant on-site impacts on the tourism resource base and influence tourists' activity participation, satisfaction and safety. Therefore, considerable attention has been paid to climate as a destination attributes (Hu & Ritchie, 1993). Climate and tourism have a complicated relationship as suggestions note that for sustainable tourism to exist there is a need for optimal permitting weather at a tourist destination (Kaján andSaarinen,2013).

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For tourists, travel decisions are to a large extent based on destination images of sun, sand, sea, or availability of snow, and thus on perceptions of climate variables such as temperature, rain and humidity (de Freitas, 2001; Smith, c1993). For at least the last 150 years there has been growing realization that the earth's climate is not fixed. Indeed, global climate has changed many times throughout history and prehistory, with often significant impacts on human well-being, communities and development (e.g. Brooke, 2014).

Among the many impacts that climate change can have on the economy, the impact on tourism activities is one of the most important, especially in some regions. Climate conditions are obviously crucial in determining tourism destination choices, so any change in climate conditions will have consequences in terms of number of incoming/outgoing tourists, tourism revenues, consumption patterns, income and welfare. The Intergovernmental Panel on Climate Change (IPCC) has noted that "climate change is any change over time, whether due to natural variability or human activity" (IPCC, 2014). Driven by a heightened sense that climate change is already happening, and will increasingly impact on tourism into the future interest is growing amongst tourism researchers and practitioners in the interactions between climate change and tourism (for example, Gren & Huijbens, 2014)

Several studies have been conducted on the likely impact of climate change on tourism. Some studies just describe the new climate conditions that will emerge in the future (Amelung and Moreno, 2009, Perch-Nielsen, Amelung and Knutti, 2010). Some other studies goes beyond that, by estimating the implied variations in tourism flows (Hein, 2007). Very few contributions investigate the macroeconomic, systemic implications of changes in the production volume of the tourism industry, especially at the international level (Berritella et al., 2006, Bigano et al., 2008, Galeotti and Roson, 2012).

The literature on travel motivations is extensive. Some authors have developed tourist profiles that link tourist activities to personality types (Plog 1974). According to this view, motivational structures are relatively stable throughout time, although they may follow a "travel career" as a result of maturation of personality (Pearce 1990). This school of thought is closely linked to Maslow's hierarchy of needs (Maslow 1954), which has

SocioEconomic Challenges, Volume 3, Issue 3, 2019
ISSN (print) – 2520-6621, ISSN (online) – 2520-6214

inspired a few researchers to suggest that tourists typically have multiple motivations for traveling, related to friendship, prestige, self-actualization, and so on (Crompton 1979)

Weather and climate can, hence, act as both push and pull factors (Hamilton, Maddison, and Tol 2005). Giles and Perry (1998) found a strong relationship between the weather in the United Kingdom and the propensity of the British to travel abroad. Climate considerations also play a major role when choosing specific holiday destinations. According to Lohmann and Kaim (1999), German citizens rank weather third on the list of important destination characteristics, after landscape and price. Smith (1993) discriminated between climate-dependent and weather-sensitive tourism. In the case of climate-dependent tourism, the climate itself attracts visitors who expect favorable weather conditions in their holiday destination. A good example of a region with this type of tourism is the Mediterranean. In the case of weather-sensitive tourism, the climate is not a tourist attraction, but weather conditions do play a decisive role when specific activities are planned (Giles and Perry 1998; Harrison, Winter bottom, and Sheppard 1999).

Among all tourism types in the Mediterranean region Coastal tourism is of the most important type which most of tourists who visit this region goes there to enjoy sun, sand and sea. The strong seasonality of beach tourism must be taken into consideration, as it can be exacerbated by climate change.

Methodology

In relation to process of data gathering for this study, a number of 70 international tourist aged between 30-40 years old were interviewed and asked several questions relating to the Mediterranean climate and its impacts on their loyalty over a particular destination (In this case, Algarve). The questions were designed in such way which certainly assisted the authors to find the true reflections of the tourist while deciding being loyal to a destination.

Those travelers to Algarve were asked about their appreciation in different aspects, including Temperature, Sunny days, Humidity, Annual precipitation (Rain), Mediterranean wind. Then, all the data received through the survey was inserted in SPSS and analyzed using a binary logistic regression. Using the right modeling strategy, the authors have been able to find the appropriate model, that is, to identify those variables that are indeed significant to explain loyalty to the destination and to quantify their positive impacts on loyalty. Using this binary logistic regression, the authors were able to find out different variable at the first and second stage of the data analysis which can be classified as step 1 and step 2. In step one; the authors examined which variable could be significant to enter in the model. In order to do it, the authors tested the variables regressing Y on a particular variable one by one. The data needed to run the model, were collected to use in SPSS. Once of that, from the first step the only significant variables having wald more than 4 were considered for the restricted version to find out which variables were possibly explaining the positive impacts on loyalty and all these variables at the restricted version had to have wald greater than 4 in average.

Dependent Variable

Loyalty to Algarve

Definition of the Dependent Variable:

Loyalty = 1 if and only if intends to return to Faro, recommend others, enjoyed stayingand would stay more,also considering the possibility of live and work.

0 = otherwise

Independent Variables

Climatic factors:

Temperature

Sunny days

Humidity

Annual precipitation (Rain)

Mediterranean wind

Note: Each of these factors measured by five sub factorsand each sub factor evaluated by five questions, each question usinga 5 Likert scale.

Therefore, the full set of independent variables are as follows:

***1*. Temp/*enjoy*:** *Willingness to enjoy Staying because of Temperature*

***2*. Temp/*stay*:** *Willingness to Stay more because of Temperature*

***3*. Temp/*recmnd*:** *Willingness to recommend others because of Temperature*

***4*. Temp/*come*:** *Willingness to come back again because of Temperature*

***5*. Temp/*live*:** *Willingness to Live & work because of Temperature*

***6*. Sun/*enjoy*:** *Willingness to enjoy Staying because of Sunny hours*

***7*. Sun/*stay*:** *Willingness to Stay more because of Sunny hours*

***8*. Sun/*recmnd*:** *Willingness to recommend others because of Sunny hours*

***9*. Sun/*come*:** *Willingness to come back again because of Sunny hours*

***10*. Sun/*live*:** *Willingness to Live & work because of Sunny hours*

11. Hmd/enjoy: *Willingness to enjoy Staying because of Humidity*

12. Hmd/stay: *Willingness to Stay more because of humidity*

13. Hmd/recmnd: *Willingness to recommend others because of humidity*

14. Hmd/come: *Willingness to come back again because of humidity*

15. Hmd/live: *Willingness to Live & work because of humidity*

16. Rain/enjoy: *Willingness to enjoy Staying because of annual* precipitation

17. Rain/stay: *Willingness to stay more because of annual precipitation*

18. Rain/recmnd: *Willingness to recommend others because of annual precipitation*

19. Rain/come: *Willingness to come back again because of annual precipitation*

20. Rain/live: *Willingness to Live & work because of annual precipitation*

21. Wind/enjoy: *Willingness to enjoy Staying because of Mediterranean wind*

22. Wind/stay: *Willingness to Stay more because of Mediterranean wind*

23. Wind/recmnd: *Willingness to recommend others because of Mediterranean wind*

24. Wind/come: *Willingness to come back again because of Mediterranean wind*

***25*. Wind/live:** *Willingness to Live & work because of Mediterranean wind*

Note: Each variable will be equal to 0 if the answers to the questions in questionnaire are choices A, B and C corresponding to no willingness or less willingness or equals to 1 when the answers are choices D and Edescribing willingness and highly willingness to be processed in SPSS software.

The dependent variable and all independent variables defined as dummies. That is to say, there are nocontinuous independent variables in this case study.

Research Questions

H1: Mediterranean climate in Generalcan make the international Erasmus students loyal to Faro as a tourist destination.

H2: Temperature can make the international Erasmus students loyal to Faro as a tourist destination.

H3: Sunny days can make the international Erasmus students loyal to Faro as a tourist destination.

H4: Humidity can make the international Erasmus students loyal to Faro as a tourist destination.

SocioEconomic Challenges, Volume 3, Issue 3, 2019
ISSN (print) – 2520-6621, ISSN (online) – 2520-6214

H5: Mediterranean wind can make the international Erasmus students loyal to Faro as a tourist destination.

H6: Annual precipitation the international Erasmus students loyal to Faro as a tourist destination.

Data Analysis

First, the author's tries to examine which variable could be significant to enter in the model. To do so, one can test the explanatory power of each individual variable on Loyalty. From the 25 variables, only 9 of them presented a Wald greater than 4. Therefore, the next step was to put all of them together to obtain the following unrestricted version of the model.

Model to Estimate

$$ln\left(\frac{P_i}{1-P_i}\right) = Y_i = B0+B1(Temp/come)i+B2(Tem/enjoy)\,i+B3(Temp/live)\,i+B4(Sun/Come)\,i$$
$$+B5(Hmd/live)\,i+B6(Rain/stay)\,i+B7(Rain/enjoy)\,i+B8(Wind/stay)\,i$$
$$+B9(Wind/live)\,i + U\,i$$

Temp/come: *Willingness to come back again because of Temperature*

Tem/enjoy: *Willingness to enjoy Staying because of Temperature*

Temp/live: *Willingness to Live & work because of Temperature*

Sun/Come: *Willingness to come back again because of Sunny Hours/days*

Hmd/live: *Willingness to Live & work because of Humidity*

Rain/stay: *Willingness to stay more because of Annual rainprecipitation*

Rain/enjoy: *Willingness to enjoy staying because of Annual rain precipitation*

Wind/stay: *Willingness to stay more because of Mediterranean Wind*

Wind/live: *Willingness to Live & work because of Mediterranean Wind*

Using Binary Logitin SPSS, the following results came up:

Step 1. Results of the estimation of unrestricted Logit model

Table 1. Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Temp/come	-.161	1.962	.007	1	.934	.851
	Temp/enjoy	2.628	1.814	2.134	1	.147	13.840
	Temp/live	2.828	1.936	2.099	1	.144	16.917
	Sun/come	4.831	2.548	3.596	1	.058	125.388
	Hmd/live	-3.429	1.704	4.049	1	.044	.032
	Rain/stay	1.579	1.688	.875	1	.350	4.851
	Rain/enjoy	1.638	2.392	.469	1	.494	5.143
	Wnd/stay	1.218	1.412	.744	1	.388	3.380
	Wnd/live	2.086	2.360	.781	1	.377	8.052
	Constant	-6.046	3.435	3.098	1	.078	.002

Source: SPSS results for unrestricted Logit Model Variables in the Equation.

Table 2. Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	18.454[a]	.361	.709

Source: SPSS results for unrestricted Logit Model Variables in the Equation.

Step 2: Some variables have Wald smaller than 4 and should be excluded from the model. The exclusion process takes into consideration the rank of the Wald values. That is first we eliminate Temp/come; then-Rain/enjoy; then Wnd/stay; and so on, up to the moment all the remaining variables will present a Wald value greater than 4.

Results of the estimation of the restricted Logit model

Table 3. Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Temp/enjoy	2.852	1.087	6.888	1	.009	17.325
	Sun/come	2.241	1.119	4.010	1	.045	9.401
	Hmd/live	-2.637	1.082	5.941	1	.015	.072
	Constant	-.053	1.227	.002	1	.966	.949

Source: SPSS results for unrestricted Logit Model Variables in the Equation.

Table 4. Model Summary for restricted model

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	19.792[a]	.348	.684

Source: SPSS results for unrestricted Logit Model Variables in the Equation.

Step 3. Testing the reduced form of the model

G^2: 19.792-18.455=1.377

df :9-3=6

The critical value for a Qui-square statistics with 6 degrees of freedom is 12.6.

Therefore, as 1.377 is smaller than 12.6 we do not reject H0:β1 = β3 = β6=β7=β8=β9= 0 (since the p-value of the null hypothesis is greater than 0,05).

Based on results of the estimation of the restricted model:

$$ln\left(\widetilde{\frac{P_i}{1-P_i}}\right) = \widetilde{Y_i} = -.053 + 2.852(Tem/enjoy)i + 2.241(Sun/Come)i - 2.637(Hmd/live)i$$

Tem/enjoy:Willingness to enjoy Staying because of Temperature

Sun/Come: Willingness to Come back again because of Sunny Hours/days

Hmd/live: Willingness to Live & work because of Humidity

Computing the Log

Considering the three dummy independent variables each can take either the value 0 or 1, the model can be translated into the8following scenarios:

1. For a tourist who has not enjoyed the *Temperatur*e (dummy variable "*Tem/enjoy*" = 0), not enjoyed the *Sunny Hours/days* (dummy variable "*Sun/Come*"= 0) and not consider the *Humidity (*dummy variable "*Hmd/live*"= 0):

$$ln\left(\frac{\hat{P}}{1-\hat{P}}\right) = -.53$$

2. For a tourist who has not enjoyed the *Temperatur*e (dummy variable "*Tem/enjoy*" = 0), not enjoyed the *Sunny Hours/days* (dummy variable "*Sun/Come*"= 0) and consider the *Humidity (*dummy variable "*Hmd/live*"= 1):

$$ln\left(\frac{\hat{P}}{1-\hat{P}}\right) = -0.053 - 2.637 = -2.69$$

3. For a tourist who has not enjoyed the *Temperatur*e (dummy variable "*Tem/enjoy*" = 0), enjoyed the *Sunny Hours/days* (dummy variable "*Sun/Come*"= 1) and not consider the *Humidity (*dummy variable "*Hmd/live*"= 0):

$$ln\left(\frac{\hat{P}}{1-\hat{P}}\right) = -0.053 + 2.241 = 2.188$$

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ISSN (print) – 2520-6621, ISSN (online) – 2520-6214

4. For a tourist who has not enjoyed the *Temperatur*e (dummy variable "*Tem/enjoy*" = 0), enjoyed the *Sunny Hours/days* (dummy variable "*Sun/Come*"= 1) and consider the *Humidity (*dummy variable "*Hmd/live*"= 1):

$$ln\left(\frac{\hat{P}}{1-\hat{P}}\right) = -0.053 + 2.241 - 2.637 = -0.449$$

5. For a tourist who has enjoyed the *Temperatur*e (dummy variable "*Tem/enjoy*" = 1), not enjoyed the *Sunny Hours/days* (dummy variable "*Sun/Come*"= 0) and not consider the *Humidity (*dummy variable "*Hmd/live*"= 0):

$$ln\left(\frac{\hat{P}}{1-\hat{P}}\right) = -0.053 + 2.852 = 2.799$$

6. For a tourist who has enjoyed the *Temperatur*e (dummy variable "*Tem/enjoy*" = 1), not enjoyed the *Sunny Hours/days* (dummy variable "*Sun/Come*"= 0) and consider the *Humidity (*dummy variable "*Hmd/live*"= 1):

$$ln\left(\frac{\hat{P}}{1-\hat{P}}\right) = -0.053 + 2.852 - 2.637 = 0.162$$

7. For a tourist who has enjoyed the *Temperatur*e (dummy variable "*Tem/enjoy*" = 1), enjoyed the *Sunny Hours/days* (dummy variable "*Sun/Come*"= 1) and consider the *Humidity (*dummy variable "*Hmd/live*"= 1):

$$ln\left(\frac{\hat{P}}{1-\hat{P}}\right) = -0.053 + 2.852 + 2.241 - 2.637 = 2.403$$

8. For a tourist who has enjoyed the *Temperatur*e (dummy variable "*Tem/enjoy*" = 1), enjoyed the *Sunny Hours/days* (dummy variable "*Sun/Come*"= 1) and not consider the *Humidity (*dummy variable "*Hmd/live*"= 0):

$$ln\left(\frac{\hat{P}}{1-\hat{P}}\right) = -0.053 + 2.852 + 2.241 = 5.04$$

Checking the research Questions

According to the restricted model, one may conclude that:

1. In the restricted model three sub-factors are present because they have shown to be significant (Walds values greater than 4). Therefore climate as General is important to explain loyalty.
2. The first climate factor (Temperature) has explanatory power and according to its high Wald value in the final restricted model shows that it is statistically significant.Therefore it can be said that H1 has been confirmed so temperature is a push motive increases the loyalty of international tourist to Algarve.
3. The second climatic factor (Sunny days) has indeed explanatory power. As the associated parameter estimate is (2.241) and H3 has been confirmed so it can be concluded that Sunny hours is a push motive that increases the loyalty of international tourist to Algarve.
4. The third climatic factor (Humidity) has indeed explanatory power. But the associated parameter estimate is negative (-2.637) therefore, one may conclude that the international tourist who come to Algarve get less loyal because of negative effect of humidity over their experience of travelling to Faro and H4 is rejected.
5. The forth climatic factor (Annual Perception) has no explanatory power. H5 (that Annual Precipitation can make international tourist loyal to Algarve) must be rejected.
6. The fifth climatic factor (Mediterranean Wind) has no explanatory power. H6 (that Mediterranean Wind can make international tourist loyal to Algarve) must be rejected.

Computing probabilities

The corresponding probabilities for the 8 above mentionedscenarios could be calculated as follows:

$$ln\left(\frac{\hat{P}}{1-\hat{P}}\right) = -.53 \rightarrow \left(\frac{\hat{P}}{1-\hat{P}}\right) = e^{-.53} = 0.588 \rightarrow \hat{P} = \frac{e^{-.53}}{1+e^{-.53}} = 37\ \% \quad (1)$$

$$ln\left(\frac{\hat{P}}{1-\hat{P}}\right) = -2.69 \rightarrow \left(\frac{\hat{P}}{1-\hat{P}}\right) = e^{-2.69} = 0.067 \rightarrow \hat{P} = \frac{e^{-2.69}}{1+e^{-2.69}} = 7.43\% \quad (2)$$

$$ln\left(\frac{\hat{P}}{1-\hat{P}}\right) = 2.188 \rightarrow \left(\frac{\hat{P}}{1-\hat{P}}\right) = e^{2.188} = 8.917 \rightarrow \hat{P} = \frac{e^{2.188}}{1+e^{2.188}} = 89.9\ \% \quad (3)$$

$$ln\left(\frac{\hat{P}}{1-\hat{P}}\right) = 0.449 \rightarrow \left(\frac{\hat{P}}{1-\hat{P}}\right) = e^{0.449} = 1.566 \rightarrow \hat{P} = \frac{e^{0.449}}{1+e^{0.449}} = 61\ \% \quad (4)$$

$$ln\left(\frac{\hat{P}}{1-\hat{P}}\right) = 2.799 \rightarrow \left(\frac{\hat{P}}{1-\hat{P}}\right) = e^{2.799} = 16.428 \rightarrow \hat{P} = \frac{e^{2.799}}{1+e^{2.799}} = 94.2\ \% \quad (5)$$

$$ln\left(\frac{\hat{P}}{1-\hat{P}}\right) = 0.162 \rightarrow \left(\frac{\hat{P}}{1-\hat{P}}\right) = e^{0.162} = 1.1758 \rightarrow \hat{P} = \frac{e^{0.162}}{1+e^{0.162}} = 54\% \quad (6)$$

$$ln\left(\frac{\hat{P}}{1-\hat{P}}\right) = 2.403 \rightarrow \left(\frac{\hat{P}}{1-\hat{P}}\right) = 2.403 = 11.056 \rightarrow \hat{P} = \frac{e^{2.403}}{1+e^{2.403}} = 92.6\% \quad (7)$$

$$ln\left(\frac{\hat{P}}{1-\hat{P}}\right) = 5.04 \rightarrow \left(\frac{\hat{P}}{1-\hat{P}}\right) = e^{5.04} = 154.47 \rightarrow \hat{P} = \frac{e^{5.04}}{1+e^{5.04}} = 99\ \% \quad (8)$$

Conclusions

1. For a Tourist who has not enjoyed the *Temperatur*e (dummy variable "*Tem/enjoy*" = 0), not enjoyed the *Sunny Hours/days* (dummy variable "*Sun/Come*"= 0) and not consider the *Humidity (*dummy variable "*Hmd/live*"= 0) the probability is…That means that 37 % of the international tourists in these conditions are loyal to Algavre as a tourist destination.
2. For a Tourist who has not enjoyed the *Temperatur*e (dummy variable "*Tem/enjoy*" = 0), not enjoyed the *Sunny Hours/days* (dummy variable "*Sun/Come*"= 0) and consider the *Humidity (*dummy variable "*Hmd/live*"= 1) the probability is 0.74.That means that 7.4 % of the international tourists in these conditions are loyal to Algarve as a tourist destination.
3. For a Tourist who has not enjoyed the *Temperatur*e (dummy variable "*Tem/enjoy*" = 0), enjoyed the *Sunny Hours/days* (dummy variable "*Sun/Come*"= 1) and not consider the *Humidity (*dummy variable "*Hmd/live*"= 0) the probability is 0.89. That means that 89% of the international tourists in these conditions are loyal to Algarve as a tourist destination.
4. For a Tourist who has not enjoyed the *Temperatur*e (dummy variable "*Tem/enjoy*" = 0), enjoyed the *Sunny Hours/days* (dummy variable "*Sun/Come*"= 1) and consider the *Humidity (*dummy variable "*Hmd/live*"= 1) the probability is 0.61.That means that 61% of the international tourists in these conditions are loyal to Algarve as a tourist destination.
5. For a Tourist who has enjoyed the *Temperatur*e (dummy variable "*Tem/enjoy*" = 1), not enjoyed the *Sunny Hours/days* (dummy variable "*Sun/Come*"= 0) and not consider the *Humidity (*dummy variable "*Hmd/live*"= 0) the probability is0.942. That means that 94.2% of the international tourists in these conditions are loyal to Algarve as a tourist destination.
6. For a Tourist who has enjoyed the *Temperatur*e (dummy variable "*Tem/enjoy*" = 1), not enjoyed the *Sunny Hours/days* (dummy variable "*Sun/Come*"= 0) and consider the *Humidity (*dummy variable "*Hmd/live*"= 1) the probability is0.541. That means that 54% of the international tourists in these conditions are loyal to Algarve as a tourist destination.
7. For a Tourist who has enjoyed the *Temperatur*e (dummy variable "*Tem/enjoy*" = 1), enjoyed the *Sunny Hours/days* (dummy variable "*Sun/Come*"= 1) and consider the *Humidity (*dummy variable "*Hmd/live*"= 1) the probability is0.926. That means that 92.6% of the international tourists in these conditions are loyal to Algarve as a tourist destination.
8. For a Tourist who has enjoyed the *Temperatur*e (dummy variable "*Tem/enjoy*" = 1), enjoyed the *Sunny Hours/days* (dummy variable "*Sun/Come*"= 1) and not consider the *Humidity (*dummy variable "*Hmd/live*"= 0) the probability is0.991. That means that 99% of the international tourists in these conditions are loyal to Algarve as a tourist destination.

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