

SURVEY ABOUT WINE CONSUMPTION

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Introduction

This paper is about wine consumption. It's the result of a survey done in my cab, during the period between June 10 2008 and January 7 2009.

The survey

The question was: if you had a glass of wine now, would you prefer to drink white, rosé or red wine? Additional information was also recorded, including: the date, the day of the week, the time, the weather, the external temperature, the apparent age and the gender.

The sample

The size of the sample was 600 people, aged between 15 and 85 years old - 326 women and 274 men were questioned.

Keys

The key for the wine is 1 for white wine, 2 for rosé wine and 3 for red wine.

The key for the day of the week is 1 for Sunday, 2 for Monday, 3 for Tuesday, 4 for Wednesday, 5 for Thursday, 6 for Friday and 7 for Saturday.

The key for the weather is 5 for sunshine, 6 for cloudy, 7 for rain and 8 for snow, with intermediate graduation.

The external temperature is in degrees Celsius.

The key for gender is 1 for woman and 2 for man.

Results

Answers are: 134 for white wine, 88 for rosé wine and 378 for red wine.

Only one variable shows a significant trend: external temperature (T).

The formula, result of linear regression, is: $wine = 2.6482 - 0.0277 * T$.

The t stat of the constant is 43.09 and -4.677 for the variable coefficient.

However, the R^2 is very low: 0.0353.

Temperatures varied between -4 and 36 °C.

If we consider the hours of the night as a continuous time, without the limit of midnight (for example: 1am=25), we find a new significant variable, the time (t).

$wine = 1.6506 + 0.0334 * t$

(5.76) (2.66)

$R^2 = 0.0117$

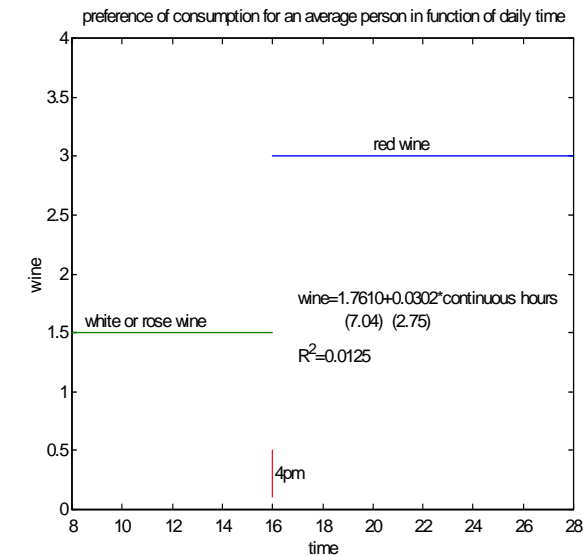
Hours varied between 8 and 28.33, but more generally between 16 and 26.

We considered also the white and rosé wine in the same category, represented by the key 1.5.

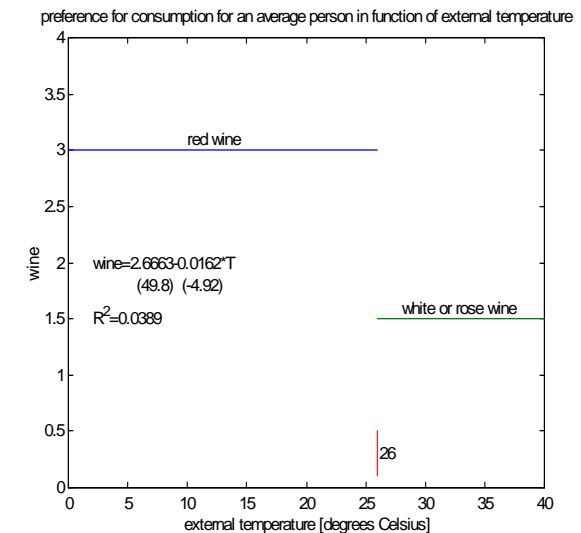
In this case, answers were 378 for red win and 222 for white and rosé wine.

Both variables are significant.

Graphics below show these relations.



After 4pm, an average person is likely to drink red wine.



After 26 °C, an average person is likely to drink white or rosé wine.

Conclusion

The answer is very random and depends on a lot of factors, not included here. Of the eight variables considered, only two show a significant trend: external temperature and continuous time.