

PROGRAMME and BOOK of ABSTRACTS

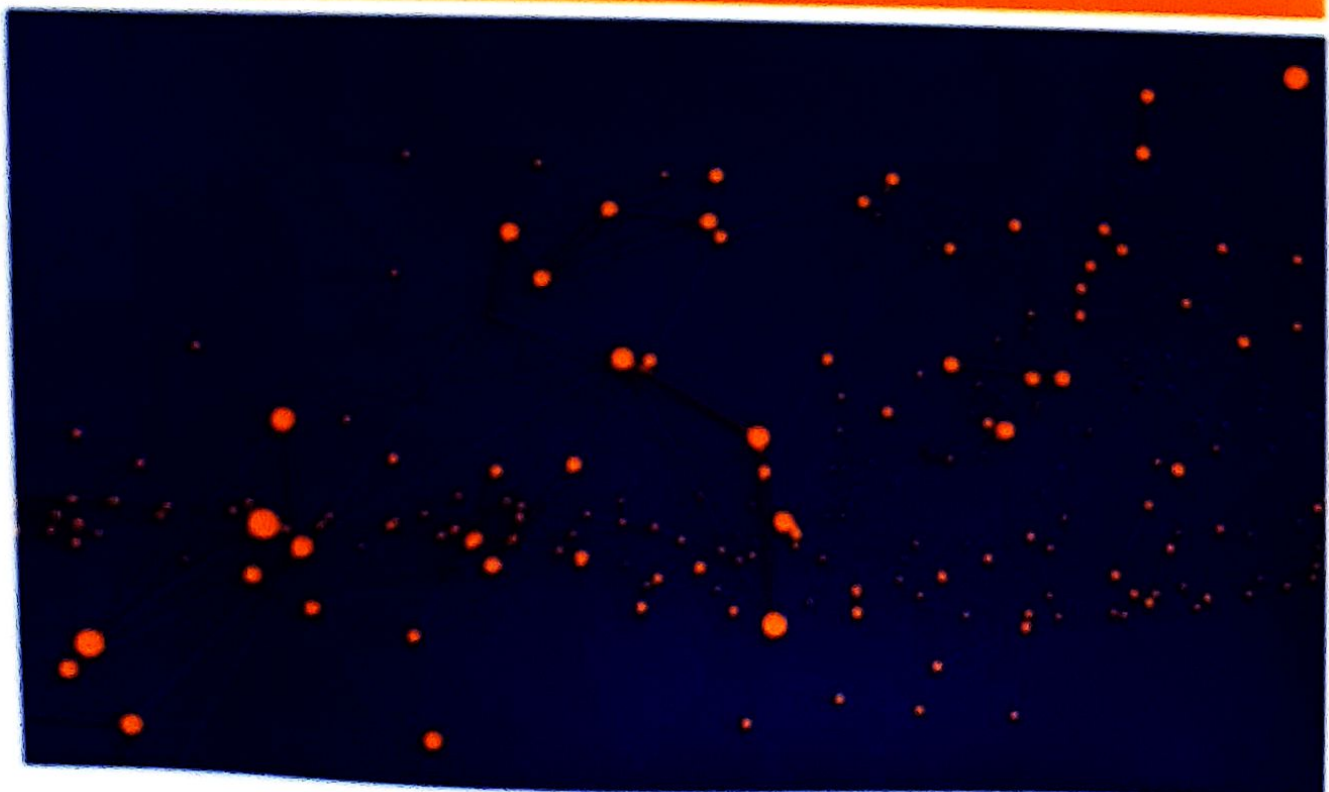
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XXX MEETING OF THE PORTUGUESE ASSOCIATION FOR CLASSIFICATION AND DATA ANALYSIS
XXX JORNADAS DE CLASSIFICAÇÃO E ANÁLISE DE DADOS



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Identifying characteristics of marketing-influenced eating vulnerability

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Marketing-driven choices in people's dietary is assessed in a cross country survey involving 16 countries. The sample comprises 11919 responses to a questionnaire developed for the EATMOT project as described in [3]. In this study, cluster analysis based on people's marketing motivations revealed two well differentiated groups: low and notably motivated consumers. These two groups were compared, outlining some characteristics of consumers who are more prone to commercial and marketing motivations.

Keywords: cluster analysis, logistic regression, marketing motivations, food choices

Numerous people's dietary decisions are influenced by commercial and marketing motivations. Advertising and marketing tactics are in fact intended to pique consumer attention and influence their purchasing decisions. Young people are known to be particularly vulnerable [1], and it is of interest to identify some other characteristics that may differentiate most vulnerable consumers. In this study, based on a sample of size 11919, collected as part of the project EATMOT [3], marketing motivations in food choices are analyzed through seven items. Factor analysis was applied by country, looking for a factor structure common to all countries. Three items were consistently combined in one factor. The other items were studied individually. Five variables were, then, considered to measure marketing motivations in consumer's food choices and used in a cluster analysis. Ward's method, single linkage, and average linkage were three hierarchical techniques that were used; their results were considered as initial solutions for the k-means method. To find an optimal number of clusters, k-means method was applied to 50 bootstrap samples and the similarity of cluster solutions for different numbers of clusters was examined using the rand index [2]. The two cluster solution emerged as an optimal solution, distinguishing consumers more prone to the influence of marketing (Figure 1). Then, using statistical tests and logistic regression analysis, these two clusters were compared. For example, consumers of the Notably Motivated cluster were significantly younger (32.7 vs 36.7 years old, $p < 0.005$), as expected, and this cluster also had a higher percentage of women (72.2% vs. 70.2%, $p=0.016$), a higher percentage of single individuals (51.9% vs. 37.9%, $p < 0.005$), a lower proportion of individuals with university education

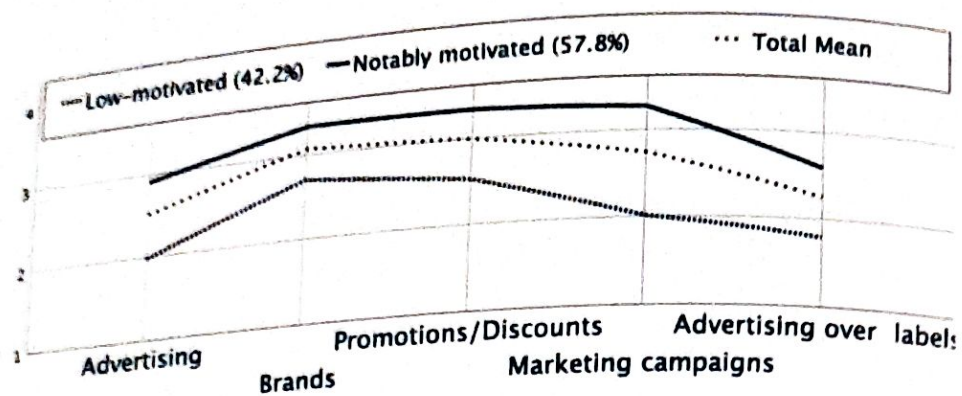


Figure 1: Clusters means in the five marketing motivations

(58.3% vs. 66.1%, $p < 0.005$), more consumers living in rural or suburban areas (37.2% vs. 27.6%, $p < 0.005$), and more consumers without an active professional activity, that is, unemployed, non-working students or retired (43.1% vs. 31.1%, $p < 0.005$). Furthermore, higher BMI and less physical exercise revealed to be associated with a greater chance of belonging to the notably motivated group ($p < 0.005$).

We thus obtained evidence that the propensity for higher levels of commercial and marketing motivations is associated with socio-demographic, anthropometric, behavioural and health related characteristics of the consumer.

[3] **Acknowledgements** The authors would like to thank the CMUC for financial support. Additionally, the authors thank project EATMOT, the FCT, CERNAS and the Polytechnic Institute of Viseu.

References

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