
Consumer segmentation based on hedonic test and sensory profiling of Aquavit

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Introduction

Traditionally segmentation of consumers has been carried out as an initial segmentation based on the consumers shopping habits as well as knowledge of lifestyle factors.

The present study is based on extracting data on consumers after segmentation. The purpose of the study was to use a new multivariate technique to reveal relevant relationships between products, sensory attributes and segments of consumer based on sensory liking.

Materials and methods

Sensory analysis was initially carried out followed by a consumer test.

Sensory profiling: Different brands (n=15) of the traditional Danish alcoholic beverage Aquavit were profiled using sensory descriptive analysis. The products were described and discriminated by the following 18 sensory attributes: Smell and taste of caraway, dill, anise, citrus, spirit, rum, Christmas spices along with burning sensation, colour and bitter and sweet taste. The descriptors were defined by references prior to the profiling. Seven assessors performed the analysis in 3 replicates.

Consumer test: Six products were chosen according to the sensory product space, and an affective consumer test was conducted. The test was carried out as a 7-points hedonic in-Home test. Each of the 161 consumers received an additional 2 replicates, a total of 8 bottles.

Results and discussion

External Prefmap was carried out using multivariate analysis (Partial Least Squares regression, PLSR) (1). The results illustrate how the consumer hedonic scores, the sensory variables and the six products were related to each other. The consumers were separated into four segments based on sensory liking. These four segments could then be characterized with respect to consumer background variables (sex, age, frequency of use etc.). Multivariate analysis revealed that not one single product was preferred but the consumer hedonic scores were scattered in the entire sensory space. The consumers in the four segments prefer certain sensory attributes and thereby certain aquavit products.

Conclusions

Consumers were segmented based on the sensory preferences. The segments differed most in sex and frequency of aquavit intake.

- Men and women who prefer classic caraway aquavit drink it approximately once a month
- Heavy users of aquavits prefer the taste of dill
- Men who rarely drink any alcohol but aquavit prefer sweet and complex flavour
- Mostly women dislike caraway

The new way of using PLSR for consumer segmentation was found to be successful.

References

- (1) Martens, H., Listov-Saabye, F., Westad, F. and Martens, M. Consumer Segmentation by L-PLS regression (in prep.)