

# Quantitative analysis of variety seeking behaviour in the organic fruit yoghurt market

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**Abstract – When consumers are seeking variety in their product choice they have a limited brand loyalty. This has an impact on the competitiveness of a brand. Organic products are specialty goods which gain increasing importance in the food market. Thus, this study provides an insight into the significance of variety seeking behaviour (VSB) in the organic fruit yoghurt market. Differences in VSB between the organic and the non-organic market are shown and implications for marketers are presented.**

## INTRODUCTION

When consumers switch between brands because they gain a utility from the switch itself it is called variety seeking behaviour (VSB) (Givon, 1984). These switchings can occur between unknown brands or between familiar brands (Johnson et al., 1995) of a certain portfolio a consumer has (Lattin and McAlister, 1985). The importance of this special consumer behaviour for marketers is based on the fact that VSB influences the ability to compete in a market (Chintagunta et al., 2001). VSB influences the demand elasticities (Chintagunta et al., 2001), the response to price promotions (Trivedi, 1999), and the affectivity of retention programs (Berné et al., 2001). In Europe retailers developed sub-brands of different lines to increase competitiveness, one is with focus on the organic segment (Ryans, 2009). In 2010 67.5% of the sales of organic products in Austria have been through the food retailing (Bio Austria, 2011). One of the most important factors in purchase decisions of Austrian consumers is the product's origin (Ameseder et al., 2009). Thus, Austrian producers have an advantage in the organic segment. In a ranking of the most important product categories in the organic market, fruit yoghurt comes in sixth place. The consumption of organic fruit yoghurt is increasing since 2008, so that in 2010 organic fruit yoghurts had a value based market share of 11.9% (AMA, 2011).

In this study Austrian panel data were used to estimate households VSB. Further the relationship between VSB and organic brands vs. non-organic brands is described and implications for marketing and brand management are conveyed.

## MATERIALS AND METHODS

Numerous studies analysing VSB have used panel data (e.g. Givon, 1984; Tang and Chin, 2007). Here too, the analyses were done with scanner household panel data (from 2007-2008 collected by GfK Austria, including 3,299 households). These were limited to the heavy users, in other words those households above the usage median (Foxall, 1981). Thus, the data set was limited to 616 households with at least 68 purchase occasions. Another limitation was based on the purchased brands. Therefore we conducted the value based market share of the brands and the top 30 brands which accumulated about 90% of the market share. Thus, the analyses were further restricted to those purchase occasions concerning the selected brands (42.31% of the whole panel).

To differentiate between organic products and non-organic products a dummy variable was included: 1 being one of four organic brands and 0 being none of them.

As a measure of VSB the "Switch of Brands" (*SB*) coefficient was used. Its computation is based on two basic approaches: Switch and Successive Switch, introduced by Menon and Kahn (1995) and used in empirical analyses (e.g. Knoll and Meixner, 2010). The *SB*-coefficient broadens and combines both approaches and is based on the number of brands ( $n$ ), the number of switches from one purchase occasion to the next ( $n_{ij}$ ), the number of purchases ( $N$ ) and the available number of brands being the maximum of any household in the panel ( $Max(n_k)$ ). The coefficient can be formally described as done in formula 1.

$$SB = \frac{(n-1) \cdot n_j}{\sqrt{(Max_{k=1}^m(n_k)-1) \cdot (N-1)}} \quad (1)$$

A value of  $SB=0$  indicates absolute variety avoidance, i.e. absolute brand loyalty. Contrary,  $SB=1$  indicates absolute VSB, i.e. a household switched on all purchase occasions between the maximum number of available brands. For a better overview, the *SB* values can be abstracted into classes ( $1: 0 \leq SB \leq 0.1, \dots, 10: 0.9 < SB \leq 1$ ).

## RESULTS

For analyses the data set including 59,581 purchase acts, of which 10.7% were of organic products, was split into two sets: the organic brand purchases and the non-organic brand purchases.

### Results of the organic brands

A oneway ANOVA was done showing that there is a difference between the groups, i.e. the means are

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not the same. Thus, a cross-table of the brands and the (classified) SB was conducted. With a Cramer's  $V = 0.184$  the cross-table indicates that there is no significant relationship between the variables. Nevertheless, it can be seen that most of the purchases of households with extreme behaviour ( $0 \leq SB \leq 0.1$  and  $0.9 < SB \leq 1$ ) did 80% and 100% of their purchases, respectively, based on price-promotions (see Fig.1).

Cross-tabulation of the brands and the existence of price-promotions (yes/no) shows a significant relationship between the variables (Cramer's  $V = 0.498$ ): The smaller the market share of the brand is, the smaller is the share of price-promotions of all its purchases.

Finally, a cross-table of the (classified) SB and the existence of price-promotions (yes/no) shows no significant relationship between these variables (Cramer's  $V = 0.119$ ). Nevertheless, here again, with an extreme SB value the number of purchases on price-promotion is high.

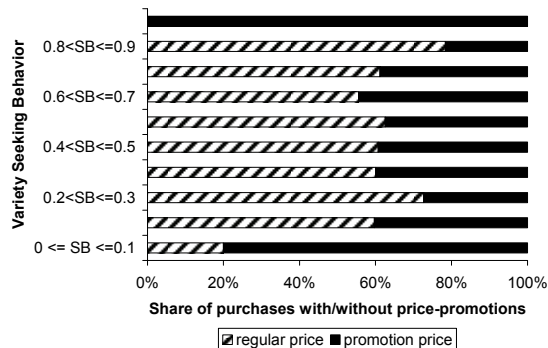


Figure 1. Price-promotions vs. regular price in context of VSB in the organic segment.

#### Results of the non-organic brands

A oneway ANOVA showed that there is a difference between the groups, i.e. the means are not the same. Thus, a cross-table of the brands and the (classified) SB was conducted. With a Cramer's  $V = 0.155$  the cross table indicates that there is no significant relationship between the variables. Nevertheless, it can be seen that most of the purchases of households with extreme VSB ( $0.9 < SB \leq 1$ ) did about 67% of their purchases based on price-promotions

Cross-tabulation of the brands and the existence of price-promotions (yes/no) shows a significant relationship between the variables (Cramer's  $V = 0.431$ ): The share of price-promotions depends on the brand but there is no visible relationship to its market share.

Finally, a cross-table of the (classified) SB and the existence of price-promotions (yes/no) shows no significant relationship between these variables (Cramer's  $V = 0.105$ ). Nevertheless, here again, with an extreme VSB the number based of purchases on price-promotion is high.

#### DISCUSSION

A comparison of the results of the organic and the non-organic brands suggests a difference in the response on price-promotions in context of VSB between both product groups. The high share of

price-promotions with extreme SB values implicates that the organic brands reach with price promotions both extremely brand loyal consumers and extremely variety seeking consumers. This and the cross-tables of brands and price-promotions show that price promotions of organic brands seemingly influence the market share of a brand. Because this trend is only visible in the organic segment, it seems to be a specific characteristic of this segment. Thus, organic brands are advised to consider variety seekers even more in their marketing strategies than non-organic brands.

#### REFERENCES

- AMA (2011). Marktentwicklung Bio. [http://www.ama-marketing.at/home/groups/7/Marktentwicklung\\_bio.pdf](http://www.ama-marketing.at/home/groups/7/Marktentwicklung_bio.pdf)
- Ameseder, C., Haas, R. and Meixner, O. (2009). Die Bedeutung internationaler Bio-Produkte für die Bedarfsdeckung in Österreich – Ergebnisse einer Expertenbefragung. In: H. Peyerl (ed). Jahrbuch der österreichischen Gesellschaft für Agrarökonomie, pp. 11-20. Wien: Facultas Verlags- und Buchhandel AG
- Bio Austria (2011). Bio-Umsätze in Österreich 2010. [http://www.bio-austria.at/partner/markt\\_\\_1/markt-daten\\_von\\_bio\\_austria](http://www.bio-austria.at/partner/markt__1/markt-daten_von_bio_austria)
- Berné, C., Múgica, J. M. and Yagüe, M. J. (2001). The effect of variety-seeking on customer retention in services. *Journal of Retailing and Consumer Services* 8 (6): 335-345.
- Chintagunta, P., Kyriazidou, E. and Perktold, J. (2001). Panel data analysis of household brand choices. *Journal of Econometrics* 103 (1-2): 111-153.
- Foxall, G. R. (1981). *Strategic Marketing Management*. Surrey: Biddles, Ltd.
- Givon, M. (1984). Variety Seeking Through Brand Switching. *Marketing Science* 3c (1): 1-22.
- Johnson, M. D., Herrmann, A. and Gutsche, J. (1995). A within-attribute model of variety-seeking behaviour. *Marketing Letters* 6 (3): 235-243.
- Knoll, V. and Meixner, O. (2010): Die Suche nach Abwechslung – am Beispiel des Fruchtsaiteinkaufs in Österreich. *Land- und Ernährungswirtschaft 2020*. Jahrestagung der Österreichischen Gesellschaft für Agrarökonomie. Tagungsband 2010: 115-116.
- Lattin, J. M. and McAlister, L. (1985). Using a Variety-Seeking Model to Identify Substitute and Complementary Relationships Among Competing Products. *Journal of Marketing Research* 22 (August): 330-339.
- Menon, S. and Kahn, B. E. (1995). The Impact of Context on Variety Seeking in Product Choices. *Journal of Consumer Research* 22: 285-295.
- Ryans, A. (2009). *Beating Low Cost Competition – How Premium Brands Can Respond to Cut-Price Rivals*. Chichester: Wiley and Sons.
- Tang, E. P. Y. and Chin, I. O. K. (2007). Analysing variety seeking behavior using panel data. *Journal of International Consumer Marketing* 19(4): 7-31.
- Trivedi, M. (1999). Using Variety-Seeking-Based Segmentation to Study Promotional Response. *Journal of the Academy of Marketing Science* 27: 37-49.