

Identifying the gap between stated and actual buying behaviour on organic products based on consumer panel data

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Abstract

Evaluating the German demand for organic food in the majority of cases has been done by interviews, which are restricted by massive overestimation of consumers themselves. By using consumer panels, it is possible to survey actual consumer behaviour in combination with consumer attitudes and socio-demographic data and also by additionally requested consumers' stated buying behaviour. Such methodology enables exposure and quantification of the gap between stated and actual buying frequency. Also the dimension of conventional products bought by mistake, while intending to get organics, can be identified. These results may give considerations for prospective survey design and adjustment of marketing policy.

Introduction

Over the last few years the organic market in Germany has shown remarkable growth. Nearly all big supermarket chains and many conventional food processors offer organic products and competition between them increases. Thus, a professional marketing policy is necessary to survive in the market. However, market success also relies on information on relevant consumers' buying behaviour to adjust marketing efforts towards consumer demand. Researchers in consumers' behaviour usually face the problem that consumers tend to greatly overestimate their spending for organic food when approached in an interview survey (Fricke 1996, Michels et al. 2004).

Based on data of a special consumer panel for organic products in Germany, the objective of this contribution is to analyse and quantify the gap between stated and actual buying behaviour in the case of organic food including the problem of consumers' buying conventional food for organic by mistake. The results may give important information for designing prospective surveys and developing or adapting marketing strategies within the organic sector.

Material and Methods

The research is based on data of a household panel from the year 2003 in Germany. This panel run by the market research company Gesellschaft für Konsumforschung (GfK), was specially designed to collect data of private households' purchases of organic food and financed by Zentrale Markt- und Preisberichtsstelle (ZMP) in Germany. Every three months, 5,000 representative German households took part in

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screenings. Selection criteria for participation in the panel were the declaration that the household used to buy organic food at least once a month and had bought a minimum of one organic product in the current or past month. Thus it was secured that only (stated) organic buyers took part in the panel and not persons who bought organic products without knowing or intending to. In context of the screening, panel households had to declare how often they normally buy organic products and what type of retail outlets in particular they use. The participating households alternated monthly within the panel. Hence, bias caused by extremely high purchases of a household was avoided. It could be achieved that more than 200 relevant households filled in a specially prepared diary on a monthly basis, listing all purchased organic products including brand, organic label, type of retail outlets, volume, price, certification number etc. Many plausibility checks were done to assure that the listed purchases were really done for organic products. So it was possible to evaluate the “organic buying behaviour”, combined with the stated buying behaviour before participation on the panel and the households’ socio-demographic data.

This paper focuses on two parts of a larger research project. The first part is to verify general differences between stated and actual buying frequency on organic products. In the second part we analyse the problem that consumers may have bought conventional products instead of the intended organic products but did not realise their mistake. As households had stated their buying frequency on retail outlets’ level, we want to show the mix up of buying conventional instead of organic quality exemplarily in the case of direct marketing (farmers’ markets and farm shops).

Results

To compare stated and actual buying frequencies, the latter were classified according to the stated classification within the screening questionnaire, as shown in Tab. 1. Observing the classified frequencies in a cross tabulation, the percentages of households’ stated and actual buying frequencies are comparable.

Tab. 1: Comparison of stated and actual buying frequency (% of households)

Self estimated buying frequency of households					
“How often do you buy organic products?”					
Actual buying frequency	Once a month	Several times a month	Once a week	Several times a week	Actual overall
None	60	50	41	23	46
Once a month	15	12	9	4	→ 11
Several times a month	15	19	19	12	→ 17
Once a week	5	6	10	9	→ 7
Several times a week	5	13	22	52	→ 18
Total	100	100	100	100	100
Stated overall	19 ↙	42 ↙	28 ↙	11 ↙	100

Example for reading: 60% of participants who estimated that they bought organics once a month did not buy at all (actual buying frequency = none). But only **15%** of all households that stated they bought organics once a month really did. Of all organic-buyers **19%** stated that they bought organics once a month, but only **11%** really bought organics once a month (arrow).

Source: Own calculation

The percentage of non-buyers is shown in the first line of Tab. 1. A total of 46% of households did not buy organic products within a month although they stated doing so. The less the stated frequency in this group, the higher the percentage is of non-buyers, going up to 60% of the stated "once a month buyers". The inside columns of Tab. 1 show the actual buying frequencies as percentages of the stated ones. The highest consistency between stated and actual frequencies is identified within the "several times a week buyers"; 52% of households of this group estimated their buying frequency accurately. Comparing overall values of stated and actual frequencies (bottom line and right column), the stated percentages are considerably higher than the actual ones. An exception is the "several times a week group"; only 11% of households estimated that frequency, but 18% really did so. On the other hand however it is very astonishing that 23% of this group did not really buy organics once a month at all.

We want to widen the above presented results with respect to the problem of buying conventional food instead of organic by mistake. To get preferably differentiated outcomes, producers' marketing as a type of retail outlet was divided into farmers' markets and farm shops. Tab. 2 shows percentages of stated and real organic buying frequencies, also considering the part of non-organic purchases, differentiated into four frequency-groups. The stated behaviour with respect to farmers' markets is three times higher than it is really. Overall, nearly 46% stated but only 15% really bought at farmers' markets, whereas 6% bought conventional qualities assuming they were organic. At farm shops the gap between stated and actual behaviour is not that high. The overall part of conventional products however is very similar to organic products (both nearly 9%).

Tab. 2: Comparison of stated and actual buying frequency at farmers' weekly markets and shops including mistaken buying acts of non-organic products (%)

"How often do you buy organic products at farmers' markets?"				
Buying frequency in % of panel households	Stated	Actual		
		Total	Organic	Non-Organic
Once a month	9.3	6.6	4.4	2.8
Several times a month	14.4	5.8	3.6	2.2
Once a week	18.9	1.6	0.9	0.7
Several times a week	2.0	0.9	0.5	0.4
Households overall	45.5	15.0	9.4	6.1
"How often do you buy organic products in farm shops?"				
Once a month	6.6	6.8	3.6	3.4
Several times a month	8.0	6.0	2.8	3.2
Once a week	7.9	2.6	1.4	1.1
Several times a week	1.6	1.8	0.7	1.1
Households overall	24.1	17.1	8.5	8.9

Source: Own calculation

The problem of purchasing conventional products by mistake, whilst intending to get organic products at producers' direct marketing channels, has also been analysed on product-level and considering socio-demographic parameters. The highest rates have been located with eggs (66%) and beef (54%), but also potatoes (45%), bread (35%)

and milk (29%) have been mixed up by high percentages. With all retail outlets and households this averages by 12%, whereas in producers' direct marketing by 34%. Especially households of older consumers without children mixed up conventional with organic products.

Discussion and Conclusions

The analysis of consumer panel data points out a big gap between stated and actual buying behaviour in the case of organic food. The results challenge the validity of the mass of interview-based surveys on the organic market. Whether social desirability or personal ignorance (Bryman 2004) about organic products are responsible for the gap between survey results and reality, is not to be answered by our study. However this would be worth attempting in further research studies and requires methodological enhancements in combining panel research and qualitative approaches to ascertain consumers' insights whilst measuring their buying behaviour. The results should be regarded when interpreting and designing consumer surveys on buying organic products. They lead us to emphasise the importance of panel research combined on household level with interview surveys to highlight the background of consumer behaviour in the case of organic food.

A gap between stated and actual buying frequencies and the high percentage of mixing up buying conventional instead of organic quality is one part of discovering discrepancy between statement and behaviour. Also the expressed willingness to pay diverges from the actual spending, as results of a Danish consumer panel show (Millock et al. 2002). To survey actual buying behaviour in the case of organic food, methods of panel research seem to be irreplaceable. The results provide the possibility to "calibrate" and enhance interview-based surveys and methods, which are necessary, as panel surveys are very costly. However methodical approaches to improve and further develop interview design (Groves and Heeringa 2006) should be considered to solve the problem of discrepancies between stated and actual buying behaviour regarding organic food.

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References

- Bryman A. (2004): *Social research methods*. 2nd ed., Oxford University Press, Oxford, 592 p.
- Groves R. M., Heeringa S. G. (2006): Responsive Design for Household Surveys: Tools for Actively Controlling Survey Errors and Costs. *Journal of the Royal Statistical Society: Series A (Statistics in Society)*. 3:439-457.
- Fricke A. (1996): *Das Käuferverhalten bei Öko-Produkten. Eine Längsschnitnanalyse unter besonderer Berücksichtigung des Kohortenkonzepts*. Europäische Hochschulschriften, Vol. 1960, Frankfurt/Main, 368 p.
- Michels P., Müller H., Schmanke A. (2004): Strukturen der Nachfrage nach ökologischen Nahrungsmitteln in Deutschland. In Goessler, R. (ed.): *Materialien zur Marktberichterstattung (Band 53)*. ZMP, Bonn, 72 p.
- Millock K., Hansen L. G., Wier M., Andersen L. M. (2002): Willingness to Pay for Organic Foods: A Comparison between Survey Data and Panel Data from Denmark, <http://www.orprints.org/73/> (accessed 2007-09-29), 25 p.