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## INTRODUCTION

In modern societies, private consumption, purchasing and using up goods and services have become constitutive elements of social life. Political, institutional and individual actions are oriented towards consumption. Therefore, information on consumption is very important for monitoring and analyzing societal development. In the last decade, sociology and psychology have started to pay attention to consumption and consumer behavior. Societal problems like the BSE crisis and issues like sustainable development demand more knowledge on causal mechanisms underlying consumption patterns.

Behavior patterns in modern societies with multiple options to act cannot be easily understood using simple social categories (see the controversy on individualization, *FRIEDRICH* 1998). Social reality is transformed by individually organized lifestyle as well by differentiated household structures. This seems to be acknowledged by social sciences at least in the context of theoretical perspectives. There is a lack of empirical information, especially longitudinal information on the dynamics of consumer behavior. Therefore social and economic research needs also longitudinal and detailed data on product demand by consumers.

In Germany, there are two large standard data-generation programs which provide data and information for the social sciences:

- the Allbus Survey and
- the German Socio Economic Panel.

These datasets offer data on opinions and economic and demographic features of the households, but they are only marginally related to consumption. Actually, no standard data base for analyzing consumption of food or other goods and services is available. Consumption data collected and provided by the German National Bureau of Statistics and specific economic institutes proved to be good reference data, but they are not sufficient for analyzing the social contexts of consumption. Nevertheless, until now there has been no initiative to establish standard data programs focused on consumption.

In contrast, non-academic market research institutes provide information and data services on consumption on a very high level. They run consumer panels, continuously producing longitudinal behavioral data on the consumption of individuals and households. As these services are aimed at supporting companies in marketing their specific products, consumer panels produce detailed information on the demand for specific consumer goods.

Actually, they are continuously recording the purchase event history of product flow into the household over years. Combined with socio-economic and demographic information on the household as well as surveys on attitudes of specific reference persons in the household, the consumer panel data program seems to be of high value for social science consumer analysis. Unfortunately, standard access to the original data was not possible recently. This resulted in only little systematic social and economic research with consumer panel data.

To open the data to public access, Georgios Papastefanou and Peter Schmidt contacted GfK<sup>1</sup> in 1997 to establish to an agreement for using the data for scientific analysis. GfK was interested in cooperation and provided the data. At the beginning of 1999 ZUMA organized an interdisciplinary working group, whose task was to examine the potential as well as the manageability of the data. Members of the group were Georgios Papastefanou, Peter Schmidt, Yasemin Boztug, Lutz Hildebrandt, Axel Börsch-Supan, Matthias Fengler, Joachim Winter, Frank Faulbaum, Petra Stein, John Thøgersen, Corinna Willhöft, Uwe Fachinger, Norbert Schneider, Doris Rosenkranz, Kerstin Hartmann, Ulrich Oltersdorf, Bärbel Geisel, Hartmut Lüdtkke, Dieter Ohr. The department of Income and Consumption at ZUMA organized and systematized the data and delivered them to the members of the working group. In October 1999 the working group members met again for a conference. They reported results and discussed the shortcomings of the data with participants from social, market and economic research. In the present special edition of “ZUMA-Nachrichten” a selection of these analyses is presented to demonstrate the scientific and practical value of this set of consumer panel data. Table 1 provides an overview of the different approaches of the analyses.

The first paper is written by *HANS-GEORG PRESTER*, who presents an overview on the production of consumer panel data at GfK. He achieves transparency by documenting methods and data collection procedures which are driven by the ultimate goal of providing a useful information service for industrial customers. He gives first hand information on the data collection programs at GfK. We also get a clear insight into specific strategies of analysis which might be interesting für social research. The paper expresses a deep interest in intensifying the cooperation between socio-economic and market research.

The paper of *HARTMUT LÜDTKE* and *JÖRG SCHNEIDER* starts by considering how behavioral life style patterns determine meanings of personal and social communication and exclusion. They examine the data for life style strategies that can also be observed in purchases of everyday consumer products. By including indicators of social position and

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attitudinal expression they further differentiate behavioral patterns along subjective and social meanings. One of the central findings is that social position and mentality correlates with fast moving consumer good purchases like food, beverages and hygiene products.

*Table 1: Overview of the different approaches*

<b>Name and Titel</b>	<b>Dependent Variable</b>	<b>Independent Variable</b>	<b>Method</b>	<b>Results</b>
<i>ROGER BERGER:</i> Consumer panel data and rational choice based theories of myopic habit formation	- coffee - beer - yogurt	- habit stock - price - income	- regression analysis	- OLS-regression of habit stock to logarithmic quantity of consumed good - OLS-regression of habit stock, logarithmic price and the logarithmic income on the logarithmic quantity of consumed: beer, coffee, yogurt - elasticities of demand for habit stock, price and income: beer, coffee, yogurt
<i>YASEMIN BOZTUG/LUTZ HILDEBRANDT:</i> Nonparametric modeling of buying behavior in fast moving consumer goods markets	- promotion	- loyalty - price	- multinomial logit model	- different model types for parametric and nonparametric choice models - estimation results of the continuous variables made by backfitting - estimation results of the continuous variables made by marginal integraion

Table 1: Overview of the different approaches (continued)

<b>Name and Titel</b>	<b>Dependent Variable</b>	<b>Independent Variable</b>	<b>Method</b>	<b>Results</b>
<i>MATTHIAS FENGLER</i> <i>/JOACHIM WINTER:</i> Price-setting and price-adjustment behavior for fast-moving consumer goods	- ground coffee	- time	- frequencies	- distribution of prices for the three fast-moving consumption goods - psychological pricing points for the three fast-moving consumption goods
<i>UWE FACHINGER:</i> Continuity or discontinuity in the decision of the application of the income of private households?	- roasted pure coffee - universal detergent - yeast	- household income - age of the housekeeping person	- product-limit estimation - proportional hazard model - cox regression	- results of the Kaplan-Meier estimation for subgroups of WGS 12 - results of the Kaplan-Meier estimation for subgroups "with caffeine" of WGS 12 - results of the Kaplan-Meier estimation for subgroups of universal detergent - the median household income in age classes - results of the Kaplan-Meier estimation for subgroups of yeast
<i>HARTMUT LÜDTKE</i> <i>/JÖRG SCHNEIDER:</i> Can patterns of everyday consumption indicate lifestyles?	- beverages - food - personal hygiene	- social position - householder's age, education, occupation - size of building, household, residence - number of children	- cluster analysis - analysis of variance	- consumer lifestyle typology

Table 1: Overview of the different approaches (continued)

<b>Name and Titel</b>	<b>Dependent Variable</b>	<b>Independent Variable</b>	<b>Method</b>	<b>Results</b>
<i>DIETER OHR:</i> Purchasing healthy food in Germany	- percentage of expenditures for healthy food	- education - age - children under 14 - income - east vs. west Germany	- cross sectional and panel approaches	- healthy food in the GfK consumer data - household expenditures for healthy food - relative frequencies for the percentage of healthy food articles in the GfK data - attitudes on nutrition - the purchase of healthy food and its determinants - a multivariate model for the purchase of healthy food
<i>GEORGIOS PAPANASTASIOU:</i> Household income level and liquor consumption	- Amount of alcoholic beverage per quarter	- purchase frequency - income position of the household - household structure	- regression analysis	- effects of income position and its change on the amount of purchased liquors in the first quarter of 1995 - effects of income position and change on purchased quantity of liquor in the first quarter of 1995 by: educational status of household head, employment status of housekeeping person

Table 1: Overview of the different approaches (continued)

Name and Titel	Dependent Variable	Independent Variable	Method	Results
<p><i>NORBERT F. SCHNEIDER / DORIS ROSENKRANZ / KERSTIN HARTMANN:</i>                      Living arrangements and consumption. Plead for a lifestyle orientated market research.</p>	<p>- crispbread</p>	<p>- Living arrangements                      - occupational status                      - age</p>	<p>- Analysis of variance</p>	<p>- significant differences between forms of living with and without children                      - significant differences between forms of living and age                      - significant differences between forms of living by occupational status                      - significant differences between selected forms of living by age and occupational status</p>
<p><i>JOHN THÖGERSEN:</i>                      Is a sustainable consumption pattern gradually emerging in Germany?</p>	<p>- product groups with environment-relevant packaging attributes</p>	<p>- attitude data</p>	<p>- factor analysis</p>	<p>- product groups with environment-relevant packaging attributes                      - the propensity to choose environment-friendly options in the studied product groups in first and second half of 1995                      - the correlation between general environmental concern and the propensity to choose an environment-friendly version of various convenience goods                      - average correlations between propensities to choose environment-friendly options in different categories</p>

*JOHN THÖGERSEN*'s paper deals with the problem of sustainable development and its foundation in individual behavior patterns. Environmentally sound behavior is based on the consumption of fast moving consumer goods for household maintenance. In his main question Thögeresen asks if there is a mechanism of spillover, where a proenvironmental purchasing disposition (expressed in the purchasing of specific goods) is transferred to other environmentally relevant products. Using product information on packaging of purchased products, he also analyses whether spillover is supported by specific attitudes and values.

The analysis of *DIETER OHR* concentrates on aspects of health in the context of a high public sensitivity towards health risks in modern food production. He asks if purchasing of food products related to health issues is influenced by attitudes towards nutrition and health. He finds consistency between purchasing and attitudes towards healthy nutrition, even if the involvement is on a medium level. Differentiating the expenses for healthy food products according to age, education and region underlines that social position, mediated by socialization and cognitive competence, determines everyday life.

*MATTHIAS FENGLER* and *JOACHIM WINTER* start from a critical evaluation of theoretical economic models on price formation and examine the dynamics and variation of retail prices. They analyze the purchases of coffee, since it is a product bought frequently and having changing prices. Their results show the importance of psychological price thresholds for price settings.

*NORBERT SCHNEIDER*, *DORIS ROSENKRANZ* and *KERSTIN HARTMANN* deal with the social differentiation of household structures. They focus on crisp bread as a product and look for its demand in various types of households by taking into account marriage status, household size, age of household head and net household income.

*ROGER BERGER* performs a trial to exploit the special informational value of consumer panel data, namely the continuous and total measurement of purchases over a period of one year. This kind of data makes it possible to model habit effects on purchase decisions, which he reports for purchases of yoghurt, coffee and beer.

Dynamic, longitudinal information is also used by *UWE FACHINGER*, who is interested in risk evaluation by consumers. He argues that individual risk evaluation should be best detected when considering continuity of purchasing behavior. The available information on precise timing of a purchase allows him to apply hazard rate models on purchases of coffee, detergents and yeast.

Another type of longitudinal information, changes in net household income is used by *GEORGIOS PAPASTEEANOU*. In his paper he examines the hypothesis that there is more demand for alcoholic beverages (with more than 20 Vol. alcohol) in higher income classes than in

lower classes. By separating income changes from income level effects on the amount of liquors bought and by differentiating this covariation by household structures, he finds empirical support for different socio-psychological functions of alcoholic beverages consumption.

Finally, *YASEMIN BOZTUNG* and *LUTZ HILDEBRANDT* focus on methodological issues of modelling consumer behavior by discrete decision models. They show advantages and disadvantages of nonparametric and semi-parametric approaches as well as an application of the semiparametric approach to specific consumer panel data.

With this volume ZUMA is documenting its initiative to improve scientific access to special longitudinal data for social and economic research. The initial working group did a very good job in showing the research potential of the consumer panel data from various points of view. So, as our main effort was aimed at supporting the consumer related social and economic research, we now want to open the data to the scientific community. One can get the ZUMA version of the GfK ConsumerScan Panel data by just sending in the signed terms of agreement (this document is printed in the Annex, but also available on the attached CD-ROM). A summary description of the data sets and some explanation for matching transformations of the data is also included in the Annex. Detailed information on the data as well as on the survey documents is available on the CD-ROM and at [http://www.gesis.org/Dauerbeobachtung/Einkommen/Daten/Gfk/gfk\\_index.htm](http://www.gesis.org/Dauerbeobachtung/Einkommen/Daten/Gfk/gfk_index.htm).

The initiative to open access to consumer panel data for scientific research has been taken by ZUMA, but it would not have been fruitful without the special motivation of the participants of the working group, the constant support of Wolfgang Twardawa (GfK), the patient assistance of Jolantha Müllner in organizing the symposium, and the untiring efforts of Antje Springer and Matthias Fleck in helping produce this volume. We wish to thank all of them for their invaluable contribution to a new service for social and economic research.

### **Editors**

Georgios Papastefanou  
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### **References**

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