

## Transaction data: commercial transaction surveys and test market data

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Bernhard Engel

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## Working Paper Series of the Council for Social and Economic Data (RatSWD)

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# Transaction data: Commercial transaction surveys and test market data

**Bernhard Engel**

## **Abstract**

Commercial transaction surveys and test market data are important sources for the analysis of consumer behaviour in various markets. The advantage of these surveys is that they do not only rely on “weak” data of consumers but also on “measured” data (eg. sales information, marketing information etc.) The key questions for the analysis of commercial transaction surveys and test market data are the prospective evaluation of market success for launched or relaunched products and services, the influence of marketing and media on product purchases under “real market conditions” and comparison between the test market and the total market. These data are not yet used by the scientific community. There are three major challenges to get access to the data. The owners of the data (market research institutes/”clients”) have to allow data access. The data must be anonymized in various ways (individuals/households, brands/products) without losing relevant information. Furthermore it is necessary to develop quality guidelines for commercial transaction surveys and test market data. In order to setup the process the RATSWD should initiate a project of official statistics, scientific community and commercial market research.

Keywords: Consumer behaviour, test market

## 1. Introduction

Commercial transactions surveys have up to now not been in the focus of interest of the RatSWD and, e.g., funding agencies for research like DFG or BMBF. Commercial transaction survey is also not a common term in market research. In order to define commercial transaction surveys in this expertise we will give some characteristics and use cases for this type of data infrastructure and also examples what is *not* a commercial transaction survey.

Related topics to this expertise can be found in the contributions to

- administrative transaction data (Lane),
- linking individual data to transaction and organizational data in life-course analysis (Liebig)
- Potential and availability of (privately financed) market research data for the for the empirical social and economic research (Wiegand)

Also the keywords access panels and (micro-) geographical data may be useful links to this expertise.

Commercial transaction surveys are surveys where transactions from business to consumers (B2C) are observed under controlled conditions. The extent of control, the unit of measurement and the unit of analysis may vary. The typical case of commercial transaction surveys are so called test markets<sup>1</sup>.

In test markets there is not only statistical control of variables on the demand side but also on the supply side of the market. On the supply side there is information about product properties, pricing, marketing activities etc. On the demand side consumers give information about their shopping behaviour (e.g. shopping baskets, frequency of shopping, preferred package sizes etc.), demographics, preferences etc. So it is possible to set up a test environment with single- or multiple treatment-response-models under controlled conditions. Test markets may be representative samples or not. It is necessary, however, that some “functional representativeness” is given. This term is used in qualitative research and means that all relevant influence factors are covered by the sample. Test markets are normally

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<sup>1</sup> One major transaction survey NHS (Nielsen Home Scan single source) finished year end 2005. In this survey the TV viewing behaviour (electronic measurement) and consumer behaviour (scanning of purchases) was measured.

defined as surveys in a clearly defined area.

However, there are also various other surveys and research methods with the name test market that we will not discuss in this paper. For this expertise we will not discuss test markets such as

a) Surveys in a single store

These surveys are often very tiny and are no relevant data sources for a scientific data structure

b) Surveys and test markets for a single client

The access to customer specific surveys is difficult and the market research focus of these surveys

c) Virtual test markets

These test markets are statistical models. The database is completely a calculation model, so there are no data on a respondent level.

d) Test markets that are fully developed markets

e.g. using Austria as a quasi test market for Germany (press release “Der Standard vom 9.6.2008 “T-mobile bestätigt UMTS-iPhone: Österreich wird TestMarkt”) or using Ireland as quasi a test market for the U.S. (introduction of special digital TV services).

In the following parts of this expertise we will concentrate on the specific characteristics of test markets as described above.

The basic research questions for test markets are

- the prospective evaluation of market success for launched or relaunched products and services and
- the influence of marketing and media on product purchases
- under “real market conditions” and
- comparison between the test market and the total market.

Test markets are one instrument among others in product development process. The industry will never use the results from a test market as the only criterion for decisions. One should keep this in mind when one has access to data from test markets.

There are different stages in the product development cycle where market research helps to optimize the launch to market (e.g. focus groups for concept and packaging tests, standardized procedures to evaluate an adequate market price etc.) The last step before launch to market is very often the launch in a test market.

## **2. Test markets in Germany – relevant cases**

There are only few generally accessible information about these test markets in Germany. We believe that these three one are relevant for this expertise. The owners are market research institutes and the results are confidential to there clients.

### GfK Behaviour Scan Hassloch/Pfalz<sup>2</sup>

GfK's test market is the largest test market in Germany. In the town of Hassloch (about 20.000 inhabitants) mainly FMCG products are tested. The sample size is 3500 households. In about 2500 households it is possible to change TV ad. The stores in the Hassloch area cover about 90-95 % of the total expenditures for FMCG.

The following overview illustrates the basic structure of the Hassloch test market with the data collected in this project. The project produces extensive data. All purchased products are labeled with the EAN Code. There are identifiers for the household, the store, the basket of all purchases a time stamp. The EAN Code can be linked to additional product information. On the household level is possible to identify the exposition to ads and sales promotion. Clients to not have access to raw data. The delivery of data is on an aggregated level.

The Hassloch test market is connected with other test possibilities in a larger area, called Vorderpfalz. In the Vorderpfalz area the sample size is very large. There are, however, no data on a respondent level, but only on an aggregate level (testing TV ad and store turnover) available for clients.

Normally the structure of the Hassloch test market is compared with Rheinland-Pfalz.

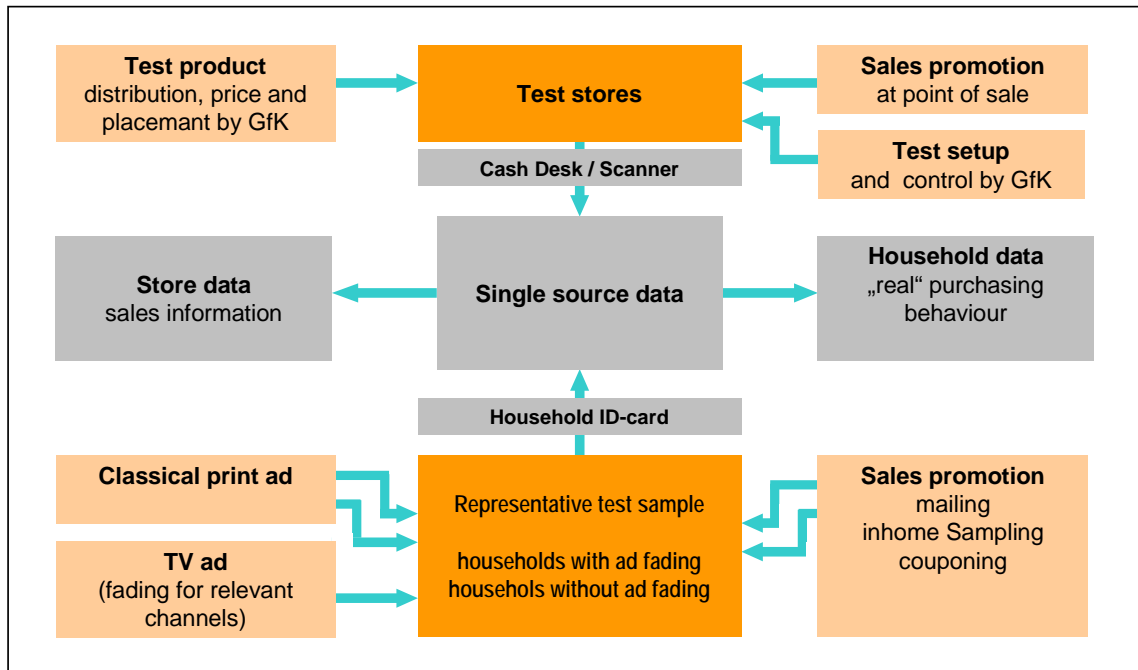
Relevant variables are age, sex, housing conditions, household type (single, family w/wo

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2 The GfK Group is one of the largest market research companies in the world. The Group has a staff complement of 10,000+ employees working in 115 operating companies covering more than 100 countries of the world.  
Högl, Siegfried and Thomas Hertle (2008): MarketingLab - Evaluatives Pretesting  
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children, foreigners) and spending power. According to these variables Hassloch has a similar structure to Rheinland-Pfalz, the spending power is slightly higher (Index = 104).

### Overview over the GfK test system Hassloch/Pfalz



Source: Högl/Hertle, English translation by B. Engel  
Arrows indicate possibility of experimental influence

### TNS Bonsai Deutschland<sup>3</sup>

TNS Bonsai Deutschland is another test panel Germany. The general approach of this project is to optimize product lifecycles. TNS Bonsai Deutschland has no continuous consumer panel but offers client specific surveys with data integration from other sources. The test market is located in Bremen.

The specific USP of TNS Bonsai Deutschland is the OTC optimizer. TNS Bonsai Deutschland has a cooperation with about 150 pharmacies in Bremen. Bonsai Deutschland continuously generates sales data of pharmacies in the OTC and free choice area (Wawi). In combination with a nationwide pharmacy panel there are various test opportunities for the launch and relaunch of products but also for marketing activities at the point of sale. Even

<sup>3</sup> TNS Bonsai Deutschland is part of TNS Group. TNS is one of the top 5 market research companies worldwide. Shareholder of TNS Bonsai Deutschland is TNS Infratest. There are only very few generally accessible information about TNS Bonsai-Deutschland.



these data are very important for the success of products in the OTC sector and the so called category management in pharmacies, the data are probably not so interesting as a common source in the German data infrastructure.

#### IP test market Friedrichshafen<sup>4</sup>

The IP test market in Friedrichshafen was established in August 2007 by Deutsche Telekom and city of Friedrichshafen. Friedrichshafen was selected because they won the T-City contest for the best ideas how to use modern broadband networks for the improvement of life quality in everyday life. Deutsche Telekom will invest 35 M€ into the IP infrastructure in Friedrichshafen and will spend another 80 M€ for the development of new products and services on the broadband net. There are various ongoing projects in this test market such as learning and search, mobility and traffic, tourism and culture, citizen and state, economy and job, health and care. The project has a cooperation with Zeppelin-University Friedrichshafen (“Deutsche Telekom Institute for Connected Cities | TICC”)

The IP test market Friedrichshafen is also an input of Deutsche Telekom for the “Nationaler IT-Gipfel”<sup>5</sup>. There are activities to establish a continuous evaluation of projects and their acceptance. Testing in the IP test market in Friedrichshafen is not only the evaluation of consumer behaviour, it is also a technological test site.

The IP test market Friedrichshafen is probably the most interesting test market. IP technology will change our everyday life in the future with various services. The IP platform also allows a continuous tracking of user actions without burden for the users.

However the IP test market in Friedrichshafen is not a public service. Deutsche Telekom has set up this test market to improve its competitive position in the IP market.

### **3. Conclusions and recommendations**

Changes in social and economic life are complex processes. In test markets this complexity is reduced to the influence of certain measures (e.g. effects of marketing, changes in the quality

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4 IP Testmarket is a project of Deutsche Telekom for testing and implementing new services based on the internet protocol (IP bases services).

5 The „Nationaler IT-Gipfel“ was initiated by German Chancellor Angela Merkel in 12/2006. The objective is to improve the position of Germany’s IT industry. The second summit was held on Dec 10th, 2007. There are several working groups that report to chancellor Merkel. One group (headed by René Obermann, CEO Deutsche Telekom) works on “convergence of media – the future of nets and services.

or the prices of products, influence of the media on consumer behaviour). So the analysis of test market data can help to develop hypothesis about social and economic change.

Test markets are also used in other European countries and in the U.S. GfK for example has comparable test markets for FMCG in Angers and le Mans (France).

As far as there are generally accessible sources the U.S. are the leader in methodology and usage of test markets. There are extensive rankings, whether a specific MSA (Metropolitan and Micropolitan Statistical Areas according to the definition of the U.S. Census Bureau) is a good consumer test market. There are about 150 named test markets in the U.S. that can be used as test markets. Criteria are not only demographics but also consumer and media behaviour, leisure activities etc.<sup>6</sup>

#### 1. Data access to existing test market data

The access to existing test market data has three major obstacles. Market research institutes and clients are owner of the data. In many cases more than one client is involved in the project. Data protection and anonymisation is necessary not only on a respondent level but also on other entities of the database like stores, products, producers of the products etc. The RatSWD could give assistance to adapt rules for data protection and anonymisation for the case of test market data.

In the case of IP test market Friedrichshafen the RatSWD could contact the TICC institute at Zeppelin University Friedrichshafen for further collaboration.

#### 2. Initiative to establish test market quality guidelines and transparency for Germany

Test markets have specific sampling requirements. It is difficult for the users of data to decide whether a test market is a “best practice”-sample or not. On the one hand it is necessary to establish a test environment under controlled conditions on the other hand the results from a test market should be transferable to the real world. Because a test market has multiple “entities” a representative population sample will not meet the needs for the test market. Additional information – like infrastructural information about the town/region where the test market is located – could help to improve the value of a test market sample. Perhaps it is useful to discuss the problem in the context of “representative sampling beyond

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6 See Acxiom (2004). Also Acxiom Deutschland offers similar data especially to direct marketing.

demographics”. The RatSWD could suggest a project of official statistics, scientific community and commercial market research with the objective to develop quality guidelines and transparency for German test markets.

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