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FOOD OR DRUGS?
A CONSUMER PERCEPTION STUDY OF BORDERLINE
PRODUCTS

Sukhada Khedkar, Asli Schaeferdiek, Stefanie Bröring

s.khedkar@ilr.uni-bonn.de

Institute for Food and Resource Economics, University of Bonn, Bonn,
Germany



2016

*Paper prepared for presentation at the 56th annual conference of the
GEWISOLA (German Association of Agricultural Economists)
„Agricultural and Food Economy: Regionally Connected and Globally
Successful“
Bonn, Germany, September 28 – 30, 2016*

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1. Introduction and problem statement

A variety of products with additional health benefits are available in the food market to cater to present day consumers who are interested in healthy living and prevention of diseases (Bornkessel et al., 2014). Such products appear to fit the description of food as well as drugs, and may be called as “*borderline products*”. These products are an empirical manifestation of the convergence between the food and pharmaceutical industries (Bröring, 2005), and bring along several issues that need to be addressed by companies as well as governments. To sustain such products in the market, companies generally need to explore the extent to which consumers prefer a “healing” food product over a drug (Zhang et. al., 2007). Governments need to regulate borderline products for consumer protection against misleading marketing activities. Overall, consumers appear to play a key role in the ultimate market success of these hybrid products (Terlutter and Moick, 2013). Therefore, we aim to investigate *how consumers perceive borderline products between food and drugs*. Mainly based on the “Buying hierarchy” concept to study consumer behaviour (Christensen, 2000; Han et al., 2009), it could be said that at higher technology levels, where a specific goal is attached to the product and performance (or the healing effect in case of borderline products between food and drugs) plays a decisive role, consumers may prefer dedicated products (i.e. drugs). In contrast, at lower technology levels, where several goals are attached to the product and convenience/ other factors (and not performance) play a decisive role, consumers may choose borderline products. Furthermore, aspects like sensory characteristics of products, packaging or presentation may influence consumer perception of borderline products. Consumers may react differently to the same product according to changes in its packaging techniques (food-like vs. drug-like) and presentation of information (graphic versus textual) (Fizman et al., 2015). Against this background, we derive the following propositions with respect to food and drugs:

Proposition 1: Drug-like characteristics of the product (package, format, dosage) are likely to influence consumers' perception of borderline products towards seeing them as "drugs".

Proposition 2: Consumers prefer borderline products at lower technology levels and dedicated products (drugs) at higher technology level.

2. Methods

An online survey was carried out in Germany in summer 2015 for our exploratory study. The survey explored consumer perception of seven borderline products: *probiotic yoghurt, phytosterol-margarine, vitamin fruit juice, omega-3 enhanced eggs, Echinacea tea, vitamin-C tablets* and *garlic tablets*. The sample composed of 104 German speaking consumers who answered the questionnaire that was based on De Jong et al. (2003). The questionnaire was divided in 5 sections: The *first* section probed about consumer health consciousness and motivation. The *second* section enquired about consumers’ consumption of the seven borderline products. The *third* and *fourth* sections focused on consumer perception of seven borderline products as regards health benefits, safety and functionality, and classification into food or drug product category respectively. The *fifth* section included questions about demographic information of consumers. The collected data were measured using a nominal or a 5 point Likert scale and were analysed by employing descriptive statistics using IBM SPSS Statistics 23.0.

3. Results and discussion

Concerning consumer perception of borderline products as food or drugs, probiotic yoghurt (60.6% consumers), vitamin fruit juice (54.8% consumers) and phytosterol-margarine (51.9% consumers) were categorized as “*food*”. Echinacea tea was considered as *food* (30.8%) or *rather food* (27.9%) while omega-3 eggs were considered as *rather food* (51% consumers). On the contrary, 62.5% consumers reported vitamin-C tablets and 50% consumers reported garlic tables to be “*rather drug*”. Thus, consumers seemed to perceive garlic and vitamin-C tablets rather as a drug than food, which may also be attributed to their drug-like appearance. These results suggest that sensory aspects and presentation of information (drug-like characteristics) may have an impact on consumer perception of borderline products between food and drugs. Thus, *proposition 1* seems to be confirmed. Further, interestingly, although consumers perceived borderline products to be generally safe to consume, they did not seem to perceive such products as an easy way to stay healthy. Regarding the preference of borderline products over drugs, except for vitamin-C tablets (44.2% agree), consumers broadly seemed to be sceptical about the authenticity and efficacy of the beneficial effects of borderline products, with probiotic yoghurt being rated the lowest (57.6% disagree). 59.6% and 38.5% respondents agreed that they would use vitamin-C tablets and Echinacea tea respectively if they suffered from a specifically aimed health condition. For all other products, consumers apparently would seek a different cure (perhaps a dedicated drug) for their health condition. These results may indicate that consumers may prefer dedicated products (drugs) where healing effect/performance plays an important role. On the basis of these results, *proposition 2* may be confirmed.

What does this imply for companies and governments? Since product characteristics seem to influence consumer perception of borderline products, which in turn may influence their perception of the functionality of such products, companies may adapt their positioning strategies accordingly or develop innovative product packaging which maintains core functionality but also highlights the added functionalities of the product (Han et al., 2009). Further, companies may want to newly focus on the convenience aspect of health benefits of borderline products. The ambiguity of consumer perception of borderline products makes it important for governments to collaborate with companies and consumer organisations to achieve consumer protection. Considering these implications and the trends in the borderline products market, further research can extend our study to a larger sample size and array of products comparing food vs. drugs to warrant a greater generalizability.

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