2 Literature review

This chapter reviews the existing literature in the context of TPPR and focuses on theoretical as well as empirical works which suggest TPPR influences on consumer behaviour. Moreover, the key consumer behaviour constructs attended to this work are subject of a thorough discussion.

2.1 Third-party product reviews

Recommendations have exerted a considerable impact on marketing research. In this context it seems reasonable to differentiate research streams focusing (e)word-of-mouth from online product recommendations (Bloom and Szykman 1998; Senecal and Nantel 2004; Shahana and Dawn 2007; Chen and Xie 2008; Lee and Youn 2009), celebrity endorsement which mainly arises in advertising (Tripp, Jensen and Carlson 1994), and TPPR in advertisements (Dean 2000; Dean and Biswas 2001). In this thesis the focus on TPPRs that are primarily published in SIMs. Research gives evidence that also film and theatre critics and their reviews do have a significant effect on the success of a film and a play (Eliashberg and Shugan 1997; Reddy, Swaminathan and Motley 1998). This study showed that when choosing a movie one third of the audience sought for reviews (Simmons 1994). Another study revealed that 44% of the online consumers consulted review websites before purchasing goods (Riller 1999).

2.1.1 Theories explaining TPPR effects on consumer behaviour

The assumed capability of TPPR to effect quality perceptions can be derived from various theories within the field of social and media psychology, information processing theory and marketing. The specific theories are discussed in the following paragraphs.

2.1.1.1 Source credibility

According to media psychology the credibility of an information source is defined as the amount to which people regard a message as reliable and upright (Batinic 2008, 300). It includes the two dimensions “expertise” and “trustworthiness“. The first dimension refers to the communicator’s capability to put forward valid assertions, the second one to the credibility that is ascribed to a message from the receiver’s point of view (Hovland, Janis and Kelley 1953, 22). Credibility depends on source factors (expertise, competence, status and attractiveness), recipient factors (motivation, mood
and need for cognition), *message factors* (e.g. complexity) and *channel factors* (e.g. type of media). The evaluation of a source’s credibility frequently serves as a means of rating and screening for the recipient (Batinic 2008, 300).

Since credible sources are perceived as more detailed representations of reality, their influence is much more persuasive than that of less credible ones (Dholakia and Sternthal 1977; Eagly, Wood and Chaiken 1978; Sternthal, Phillips and Dholakia 1978).

For studying the effect of TPPR on consumer behaviour this line of research (for a detailed review see Sternthal, Phillips et al. 1978, 287) is of great importance. Trustworthy sources and expert arguments trigger more positive positions with respect to the opinion propagated (Hovland and Weiss 1951; Kelman and Hovland 1953; Watts and McGuire 1964; Whittaker and Meade 1968; Warren 1969; Schulman and Worrall 1970). Additionally, credible sources arouse more behavioural compliance than incredible sources (Crano 1970; Schulman and Worrall 1970; Crisci 1973; Ross 1973; Woodside and Davenport Jr 1974; Ohanian 1991).

These aspects suggest that source credibility serves as a valuable framework for studying TPPR effects on consumer behaviour.

### 2.1.1.2 Attribution theory

According to the discounting principle of attribution theory a communicator will be seen as biased by the recipient when the latter experiences that the message can be attributed to personal or situational causes; so consumers will discredit these product evaluations (Kelley 1973). In the case of TPPRs a biased perception can arise when consumers get the feeling that the experts carrying out the tests are related to some of the product’s manufacturers or when SIMs are interested in preferring their most eminent advertisers by suppressing bad results or by overstressing average results. If so, it can be assumed that the reader's assessment of the information is that it is not credible. This implies that in such cases TPPR exert no or negative influences on product perception and preference (Senecal and Nantel 2004, 160).

### 2.1.1.3 Risk taking theory – uncertainty and risk reduction

Perceived risk in the context of buying decisions can be defined as the anticipation of negative consequences arising from a potential purchase (Bauer 1960; Cox 1967a).
Consumers have possibilities to reduce risk and the uncertainty associated. Information acquisition represents one possibility. The implementation of perceived risk models assumes particular product specifications. These are complex functions of the product (technological intransparency, high requirement for thorough explanation), a lack of divisibility and the impossibility of trial purchase, premium priced products with a high degree of innovation, a high ego-involvement of the customer with the specific product line or products that show little conformance with respect to social norms, connected with considerable public usage (Schweiger, Mazanec and Wiegele 1976, 94; Dholakia 2001).

All these attributes seem to be particularly true for products tested in special-interest-magazines (high-end mountain bikes, hifi-components, wines, running shoes, windsurfing equipment etc.). In such cases consumers seek for those chunks of information that are characterised by high problem relevance with respect to reducing perceived risks (Cox 1967a, 618ff). Here marketing science distinguishes between financial, functional, health, psychological, social and time related risks (for detailed discussions see Cox 1967a; Cunningham 1967; Panne 1977). As a warranty is capable of reducing product and financial risks (Shimp and Bearden 1982, 42ff), TPPR is believed to decrease perceived risks within the other dimensions, too.

Urbany, Dickson and Wilkie (1989) brought up the differentiation between knowledge uncertainty (i.e. the knowledge which products are accessible to fulfil the consumer’s needs) and choice uncertainty (i.e. the question which product(s) to choose). As TPPRs discuss evaluative measures of products and compare product performance, they may raise both, knowledge and choice certainty.

2.1.1.4 Economics of information

Usually consumers have to make purchase decisions although they lack full information on the variety obtainable. According to Nelson (1970) this is due to the fact that consumer information search causes costs. As consumers differ in their need for relevant information and in their willingness to collect information, they are unequally informed.

Stigler (1961) claims that the expected savings from an information search process are positively related to the dispersion of prices. The degree of search is negatively related to the cost of search and the achievement of search is subject to diminishing returns.
Adapting Nelson’s (1974) work on the informational character of advertising Dean (Dean 1999; Dean and Biswas 2001) proposes that TPPRs within ads may be perceived as highly informative chunks of information. Their marginal costs of obtaining are exceeded by their marginal benefit. This underlines the assumption that TPPRs providing information on credence and experience attributes are of vast importance in the quality perception process.

Gathering market and product information costs time and money. As buyers value the costs and the return of information search processes differently, we can act on the assumption that buyers are unequally informed. Accordingly sellers are able to charge higher prices from a number of customers. TPPRs have been shown to be able to dissolve or at least diminish these asymmetries in information (Faulhaber and Yao 1989; Lizzeri 1999).

### 2.1.1.5 Cognitive consistency and balance theory

Consistence theories deal with cognitive systems, i.e. the cognitions of an individual being interconnected. Attitude change by communication is often based on a situation in which the content of a message produces inconsistencies. This could be the case when a consumer reads a very positive TPPR about a product he/she regards minor in quality. As the individual seeks to reduce inconsistencies that cause tensions, the TPPR may increase the value of the attitude object (Herkner 2001).

Heider’s balance theory (1958) encompasses the three elements individual and perception(s), attitude object and another person or object. TPPR can be one of these objects. A positive link can be established if the individual has a positive attitude towards the TPPR. In the case of a report praising one specific product, the second positive relation will be developed by the customer. With two positive relations already created, balance theory suggests that the consumer will seek balance and build up a positive attitude towards the product.

### 2.1.1.6 Signal theory

Consumers are often unsure of the quality attributes of the products they intend to purchase. Manufacturers try to reduce these feelings and their inherent risk perceptions by sending various signals. Warranty, price and the reputation of a manufacturer may serve as such signals (Shimp and Bearden 1980; Shimp and Bearden 1982; Boulding and Kirman 1993).
To be trustworthy however these indicators have to include a “bonding” element (Ippolito 1990). This could be a possible spending of the sender of the signal, e.g. a reparation expenditure in the case of warranty. The “bonding” element in connection with TPPRs is the endorser’s reputation that could get lost by faulty test publications. This might be another reason why TPPRs serve as signals for unobservable product quality.

2.1.2 Empirical evidence for TPPR effects on consumer behaviour

A lot of research has been carried out emanating from studies that deal with Consumer Unions’ test publications. TPPRs in special interest magazines have received little interest so far.

Marketing research has predominantly focused on the role of test reviews in the consumer’s pre-purchase information behaviour. With respect to long-living durables like home appliances, between 18 and 85% of the consumers consulted TPPRs prior to purchase (GfK 1974; N.N. 1975; Thorelli, Becker and Engledow 1975). 23% admitted that they gathered price and quality information for greater acquisitions via TPPRs in newspapers, 13% via TPPRs in publications of consumer unions, 80% in the shop and 17% via advertisements (N.N. 1976).

A large scale study by the European Commission found that nearly 30% changed their buying behaviour at least once as a result of reading TPPRs (EG-Kommission 1976). Similar to that Scherhorn and Wieken (1972) illustrated that 38% changed their petrol station operator and 50% the washing powder used. Au and Tse (1993) confronted customers of soft drinks and hair sprays with a negative TPPR, containing statements like “This product harms body and environment”. As a consequence 33% used the product less frequently, 10% abandoned the product completely.

Fireworker and Friedman (1977) showed that experts’ product recommendations could influence the costumers’ product attitude significantly. Moreover consumers’ price assessment of the products rated became significantly higher. Friedman and Friedman (1979) illustrated the ability of TPPR to reduce perceived risk and raise willingness-to-buy. These works serve as one of the cornerstones of this thesis. A comprehensive outline of these studies is given by Table 1.
<table>
<thead>
<tr>
<th>Author/s and Citation</th>
<th>Question/s and research focus</th>
<th>Study descriptors (method, participants)</th>
<th>Kind of TPPR</th>
<th>Findings</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Scherhorn and Wieken 1972)</td>
<td>Purchase-based impact of neutral consumer information, distribution of education letters informing about high price and low quality differences; detergent and fuel brands</td>
<td>---</td>
<td>Non-commercial</td>
<td>38% changed petrol station provider 50% changed detergent brand</td>
<td>Descriptive results only, no hypotheses testing</td>
</tr>
<tr>
<td>(GfK 1974)</td>
<td>How have you caught up on ... before buying? TPPR usage</td>
<td>Representative survey among customers, n=4378</td>
<td>Non-commercial</td>
<td>18% TPPR 30% discussions with relatives 32% shop window 64% sales advisory service TPPRs were mainly relevant in connection with major purchases (here: appliances)</td>
<td>Multiple answers were possible, no hints which source was mentioned first of all</td>
</tr>
<tr>
<td>(N.N. 1975)</td>
<td>How often have you consulted TPPRs when shopping? TPPR usage</td>
<td>Representative survey among readers of the consumer journal “Test”</td>
<td>Non-commercial</td>
<td>91% among subscribers 85% among single-issue purchasers</td>
<td>Unclear questioning, other TPPRs have not been considered</td>
</tr>
<tr>
<td>(Raffée, Schöler et al. 1975)</td>
<td>How helpful were journals publishing TPPRs (for the purchase of household appliances, audio and TV) Consumer behaviour and TPPR</td>
<td>Personal interviews n=150 urban n=150 rural</td>
<td>Non-commercial</td>
<td>Urban: 16.6% helpful vs. 49% no help Rural: 12.6% helpful vs. 54% no help</td>
<td>Sample size given very small, merely hints that TPPRs may support purchase decisions.</td>
</tr>
<tr>
<td>Study (Author and Year)</td>
<td>Research Question</td>
<td>Sample Size and Type</td>
<td>Commercial &amp; Non-commercial</td>
<td>Key Findings</td>
<td>Notes</td>
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<tr>
<td>Thorelli, Becker et al. (1975)</td>
<td>How often have you considered TPPRs in your purchase decision? Have you bought the product proposed by &quot;DM&quot; and/or &quot;test&quot;? Consumer behaviour and TPPR</td>
<td>n=325, &quot;test&quot;-subscribers and 285 &quot;DM&quot;-subscribers</td>
<td>Commercial &amp; non-commercial</td>
<td>56% considered TPPRs at least once before major purchases (appliances) 45% bought the product recommended</td>
<td>Small sample and unclear phrasing</td>
</tr>
<tr>
<td>(EG-Kommis-sion 1976)</td>
<td>Would you say that your purchasing behaviour has changed since you got to know comparative TPPRs? Consumer behaviour and TPPR</td>
<td>N=1002</td>
<td>Commercial</td>
<td>I changed my purchase behaviour at least once: 40% Germany 28% European Union average</td>
<td>No explanation of measurement instrument</td>
</tr>
<tr>
<td>(N.N. 1976)</td>
<td>How do you catch up on price and quality when you intend to do major purchases? TPPR usage</td>
<td>---</td>
<td>Commercial &amp; non-commercial</td>
<td>80% in the shop 23% TPPR in newspapers 17% advertisements 13% TPPR in the journal of the consumer union 8% customer advice</td>
<td>The list shown to the consumers was an incomplete list of potential information sources.</td>
</tr>
<tr>
<td>(Fire-worker and Friedman 1977)</td>
<td>Impact of product endorsement claims (expert, celebrity and typical customer endorsement) on the decision process of customers. Product: new wine brand. Consumer behaviour and TPPR</td>
<td>n=200, face-to-face interviews</td>
<td>Commercial</td>
<td>Expert und celebrity endorsement showed a significantly positive effect on the attitude towards the product. Additionally, all three endorsements triggered significantly higher price estimates.</td>
<td>As students were engaged as interviewers there might have occurred considerable interviewer effects.</td>
</tr>
</tbody>
</table>

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5 A commercial journal that publishes TPPRs for several products.
6 A journal issued by Stiftung Warentest, the German Consumer Union.
<table>
<thead>
<tr>
<th>Source</th>
<th>Research Question</th>
<th>Methodology</th>
<th>Findings</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friedman and Friedman (1979)</td>
<td>Is the impact of particular advertisement containing TPPR (celebrity, experts and typical consumer) moderated by type of product?</td>
<td>Experimental design: 4 (celebrity, experts, typical consumer, none) x 3 (vacuum cleaner, cookies, jewels) between subjects factorial</td>
<td>Consumer behaviour and TPPR</td>
<td>Significant effects of the combinations celebrity/jewellery (psychological/social risk) and expert/vacuum cleaner (financial/performance/physical risk) and typical consumer/cookies (low overall risk) were found. These combinations trigger higher overall product attitudes, higher purchasing intentions and higher credibility, too.</td>
</tr>
<tr>
<td>(N.N. 1979)</td>
<td>How often have you been guided by TPPRs during shopping? Impact of TPPRs during purchase decision</td>
<td>n=601 customers, face-to-face interviews</td>
<td>Non-commercial TPPR</td>
<td>15% once 36% several times 48% never Consideration of TPPR rises with education and declines with age, “working” women devoted themselves more often to TPPRs than “only housewives”.</td>
</tr>
<tr>
<td>Silberer, Fritz et al. (1981)</td>
<td>Consideration of TPPRs during the purchase of consumer goods, socio-demographic structure of the users TPPR usage</td>
<td>n=14358 representative for the German population (except for children),</td>
<td>Non-commercial TPPR</td>
<td>Usage of TPPR 20-40% with consumer durables 7-17% with consumer goods no socio-demographic differences found Only descriptive findings, no hypotheses tested</td>
</tr>
<tr>
<td>Study</td>
<td>TPPR as cues to simplify decision processes. Product: stereo equipment. TPPRs as cues</td>
<td>n= 40 students, laboratory experiments, purchase situation simulated by information display devices</td>
<td>TPPRs do not only serve as sole information source prior purchase. People who requested brand-specific TPPR at first needed less attribute-specific information in all information sources and considered fewer brands. Thus TPPR simplified choice processes, reduced consideration sets and the amount of information on product attributes needed.</td>
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<tr>
<td>Olshavsky and Rosen (1985)</td>
<td></td>
<td></td>
<td>Small sample, only students, information display method: customers might show different behaviour compared to real life situations, only one product category studied</td>
<td></td>
</tr>
<tr>
<td>Study</td>
<td>Consumers of hairspray and wellness drinks were provided with negative TPPR (the respective products “harm body and environment”) Purchase decision and TPPR</td>
<td>n=200 students, convenience sample, face-to-face interviews with structured questionnaires</td>
<td>Wellness drink: 8% changed brand, 66% did not change consumption behaviour, 33% drank less Hairspray: 68% kept using it, thereof 3% used even more, 33% less, the rest kept consumption level</td>
<td></td>
</tr>
<tr>
<td>Au and Tse (1993)</td>
<td></td>
<td></td>
<td>No significant results, small sample size, convenience sampling</td>
<td></td>
</tr>
</tbody>
</table>

**Table 1: TPPR influence on information, decision and consumer behaviour**

The above-mentioned studies can be criticized for several reasons. Firstly, they were mainly carried out in the form of descriptive interviews. This makes it impossible to deduce causal relations between the effect of a TPPR and consumer characteristics and other constructs like perceived quality or willingness-to-buy. Secondly, some suffer from unclear and ambiguous phrasing like “How often have you addressed yourself to TPPR in shopping situations?” or “In how far was the TPPR helpful in a specific buying situation?” Thirdly, some studies did not face problems of social desirability and worked with small sample sizes only.
Moreover it has to be mentioned that these studies were carried out long before the advent of the internet. A study of information behaviour prior to purchase should also incorporate online sources like e-word-of-mouth (Lee and Youn 2009) or endorsements published in the internet.

2.1.3 TPPR and advertising
A related field of research gives special attention to the relevance of TPPRs integrated in advertisements. It could be illustrated that ads containing TPPR led to higher perceived information values of the ads than the same ads without TPPR (Dean and Biswas 2001).

Beyond that significantly better evaluations of perceived quality, enlarged values of product uniqueness and perceived manufacturer esteem for the same product were observed in an pre-purchase experiment with ads containing TPPR (Dean 1999).

Apart from that Dean (2000) experimentally compared the effect of TPPR with celebrity endorsements. The TPPR group had decisively higher scores on perceived quality, perceived product uniqueness and attitude towards the manufacturer than the celebrity group and the control group. The opposite effect was observed with respect to perceived risk.

The experimental approach including real TPPR (here taken from Consumer Digest) seems to assure external validity. The fact that the experiment was carried out with students only could be seen as a limitation. However, in summary, these two works can be seen as a valuable starting point when studying TPPRs in the context of purchase situations.

2.1.4 TPPRs and marketing strategy
Another related stream of research deals with the interaction of TPPRs and firms’ marketing strategies. To put it into more detail this stream focuses on the connection between TPPR, pricing and advertising from a macro perspective (Archibald, Haulman and Moody 1983; Chen and Xie 2005). Chen and Xie (2005) give strategic recommendations based on a sophisticated model. They used data from the printer and running-shoe market to fit their model and to illustrate their findings. As a strategic variable in response to TPPR they recommend to use advertising first and not so much price when enough consumers value horizontal product attributes. Unexpectedly, they
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A Dichotomous Measuring via Rasch, Paired
Comparison and Graphical Chain Models
Ziniel, W.
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