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## Abstract

Lifetime guarantees offer an opportunity for companies to signal exceptional longevity, quality and reparability, and can benefit both customers and businesses. However, lifetime guarantees usually vary in scope and length, include restrictive conditions, and are oftentimes vaguely worded, potentially misleading or confusing consumers. Therefore, the purpose of this study was to examine the impact of lifetime guarantees with limitations compared to those without limitations on brand attitudes, hypothesizing that omitting restrictions leads to more favorable evaluations. Since guarantees are typically used as quality signs, signaling theory was employed to explain this effect by studying quality perceptions as a potential mediator. Furthermore, it was intended to explore whether the presumed positive effect applies equally to all consumers, or whether certain personality traits, specifically a tendency to seek variety, would moderate the effect. An online experiment with 177 participants revealed that an unlimited lifetime guarantee increases consumers' brand attitudes by eliciting higher quality perceptions compared to a limited lifetime guarantee. A moderation of variety seeking could not be confirmed, which can be attributed to various causes, and reveals the potential need for future research in this area. The study contributes to the literature by providing initial empirical evidence of the effects of lifetime guarantees, which can help companies design effective guarantees to successfully communicate their commitment to product quality and durability.

*Keywords:* lifetime guarantee, quality signaling, variety seeking, durability

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# 1 Introduction

A lifetime guarantee represents an intriguing promise, eliciting associations of high-end, durable quality, possibly with a touch of sustainability (O’Connell, 2016; Richard, 2023). At the same time, however, it inevitably raises the question of what the “lifetime” refers to: *whose* life? Since the understanding of consumers and companies often diverges in this respect, its use entails not only opportunities but also certain risks (Bauer, 2019; Tims, 2019; Rose, 2020; Tatum, 2023; Booth, 2023). Despite the seeming unusualness of this business practice, numerous companies offer lifetime guarantees in a variety of industries, ranging from apparel (e.g., Patagonia, The Northface, Camper, Feetures Socks), to bags and luggage (e.g., Dakine, Briggs & Riley, Duluth Pack, GoRuck, Timbuk2), gear (e.g., CamelBak, Davek Umbrellas, Dynafit, Pelican, Reduce, Polar Bottle, Manduka), tools (e.g., Craftsman, DeWalt, Gerber, Kobalt, Sealey, Victorinox), and many more (Richard, 2023).

In the absence of an official definition, the lifetime guarantee is defined by the company itself and typically refers to the *standard lifetime of a product*, which is sometimes further concretized in years (e.g., Dynafit, H.A.D., Manduka, Dakine), but also often left unspecified (e.g., Osprey, The North Face, North St. Bags). In some cases, however, the lifetime guarantee refers to the consumer’s life or a comparably long time period (e.g., Briggs & Riley, Davek Umbrellas, Saddleback Leather), illustrating the manifold interpretations of lifetime guarantees. One can even take it to extremes, like Patek Philippe who guarantee service and repair of all their watches manufactured since 1839 (Patek Philippe, n.d.). Based on the literature about guarantees and quality signaling (e.g., Wiener, 1985; Boulding & Kirmani, 1993; Kirmani & Rao, 2000), it can generally be assumed that guarantees have a positive effect on the evaluation of product quality and attitudes towards brands, and that longer guarantees signal higher reliability and quality compared to shorter ones. However, the positive effect of guarantee extensions depends on the credibility of the firm (Boulding & Kirmani, 1993) as well as the credibility of the guarantee itself and its limitations (Menezes & Quelch, 1990; Owen, 2004). Accordingly, consumers might feel misled when a lifetime guarantee is limited in time, as is usually the case, due to the semantic confusion (“whose lifetime?”), they may be disappointed if their initial expectation (“consumer’s lifetime!”) is not met by the claim, and thus be inclined to rate the brand and its quality less favorably (Hastak & Mazis, 2011). While there is no empirical data available on the effect of limited lifetime guarantees compared to no guarantees, it seems reasonable to assume that unlimited

lifetime guarantees will lead to more favorable brand attitudes by eliciting higher quality perceptions compared to those including limitations.

However, this rather straightforward effect could, akin to the effectiveness of other marketing strategies aimed at customer retention (Adjei & Clark, 2010), depend on certain personality traits. While some consumers strive to increase their satisfaction by aiming for higher quality in their consumption, others draw their benefits primarily from the variation in goods and brands (Helmig, 2013). This tendency to seek variety seems to be on the rise as a result of current socio-political and economic developments, be it due to heightened perceptions of threat (Kim, 2020; Kim et al., 2022), lower economic mobility (Yoon & Kim, 2018), pervasiveness of individualism (Kim & Drolet, 2003; Santos et al., 2017; Olsen, 2021; Zukunftsinstitut, 2023), or large numbers of brand alternatives within product categories (Van Trijp et al., 1996; Tang & Chin, 2007). The desire to switch between products and brands seems somewhat contradictory to the commitment to a “lifetime product”. Various studies (McAlister & Pessemier, 1982; Simonson, 1990; Kahn, 1995) have shown that when consumers anticipate future preferences, they tend to seek variety in their consumption to provide against the uncertainty about potential changes in tastes. A product that promises to last a lifetime offers no prospect of variety in the future, and could therefore be perceived as restrictive by variety seekers, consequently causing them to evaluate such claims less favorably. Furthermore, variety seekers have been described as nonconformists and risk takers who perceive ambiguous claims as less threatening (Zuckerman, 1979; Raju, 1980), suggesting that the effectiveness of unlimited lifetime guarantees as risk reducing and quality-assuring signals may not be as great for variety seekers.

Furthermore, variety seeking behavior varies across product categories not only depending on perceived differences among brands, but also on other, product category-level characteristics; more specifically, it increases with purchase frequency, hedonic features, and lower levels of involvement (Van Trijp et al., 1996). Should a moderating effect be confirmed, then companies offering such products (e.g., apparel, accessories) could reevaluate the use of unlimited lifetime guarantees, which are in nature costlier and more difficult to enforce. By better aligning their guarantee strategy with their targeted customer segments and thus avoiding additional costs and facilitating the implementation of the guarantee program, companies could maximize the benefits and minimize the drawbacks of lifetime guarantees, and thereby achieve competitive advantage more efficiently.

Given the amount of companies offering lifetime guarantees (e.g., Richard, 2023), the associated costs (Wirtz & Kum, 2001, 2004), the doubts about the credibility of excessively long guarantees (Menezes & Quelch, 1990), the potential legal issues that go along with it (e.g., Richard, 2015; Booth, 2023), and the ongoing debate about the ambiguous nature of the “lifetime” label (e.g., Tims, 2017, 2019; Rose, 2020; Tatum, 2023), this study seeks to provide insights whether unlimited lifetime guarantees are in fact a more effective marketing strategy for brands compared to limited lifetime guarantees—and, if so, whether this also applies to firms targeting variety seekers:

*RQ: Does an unlimited lifetime guarantee lead to more positive consumer attitudes towards a brand than a limited lifetime guarantee, and can this effect be explained by an increase in quality perceptions? Do these effects weaken respectively reverse for variety seekers?*

## 2 Literature Review and Hypothesis Development

### 2.1 Lifetime Guarantees

The principle of the guarantee has existed in various forms since the beginning of trade, and many states have regulated certain types of guarantees over time (Murthy & Djamaludin, 2002). The European Union, for example, clearly distinguishes between statutory guarantees (i.e., required by law) and commercial guarantees, which are defined as:

any undertaking by the seller or a producer (the guarantor) to the consumer, in addition to the seller's legal obligation relating to the guarantee of conformity, to reimburse the price paid or to replace, repair or service goods in any way if they do not meet the specifications or any other requirements not related to conformity set out in the guarantee statement or in the relevant advertising available at the time of, or before the conclusion of the contract. (Directive 2019/771, p. 40)

As this form can be offered by companies voluntarily in different scopes and lengths, and is therefore the relevant version in the context of business studies, this understanding shall be used in the following for the concept of the guarantee.

One such variation offered by companies is the lifetime guarantee, advertising one of the most visible features of a guarantee, namely its length (Menezes & Quelch, 1990). What *lifetime* refers to—the product’s life, consumer’s life, or a specific time period—is defined, in the

absence of an official definition, by companies themselves (Tims, 2019; Rose, 2020; Tatum, 2023). As might initially and intuitively be expected by consumers, *lifetime* often does not refer to the consumer's lifetime, but to the typical or practical life of the product and is therefore limited in time (Bauer, 2019; Rose, 2020; Tatum, 2023). Some companies further specify the practical lifetime of their products by stating exact years (e.g., Dynafit, Tupperware, Manduka, Dakine, H.A.D.), but—despite a U.S. regulation mandating a clear definition of the term *life* in this context (“Lifetime” and similar representations, 1985)—many firms leave the exact length undefined. Thus, combined with their susceptibility to semantic confusion (i.e., consumers might have different perceptions as to what the lifetime refers to; Hastak & Mazis, 2011), lifetime guarantees carry a certain risk of misunderstanding, and consequently, adverse effects on customer satisfaction, which can compromise the benefits a lifetime guarantee potentially entails (Tims, 2017, 2018; Rose, 2020; Tatum, 2023).

Whereas the statutory guarantee functions primarily as a protection for the consumer (Directive 2019/771), the commercial guarantee “serves many purposes” for both consumers and businesses (Murthy & Djamaludin, 2002, p. 232).

Drawing upon existing literature, the main functions of guarantees for consumers focus on their role in providing protection and information (Murthy & Djamaludin, 2002; Twigg-Flesner, 2016; Alqahtani & Gupta, 2017). Owen (2004) argues that guarantees function similarly to insurance policies in that they provide consumers with protection against unforeseen product performances by ensuring them that they are safeguarded against potential risks or losses resulting from defective or substandard products. In addition to their protective nature, guarantees serve as a valuable source of information for consumers by assuring them of the quality and longevity of products (Murthy & Djamaludin, 2002). This assurance plays a crucial role in reducing uncertainty and risk associated with purchases, providing consumers with confidence and security, and thus aiding them in the decision-making process (Heiman et al., 2001; Murthy & Djamaludin, 2002; Twigg-Flesner, 2016; Alqahtani & Gupta, 2017). In cases where products possess greater complexity and are difficult for consumers to evaluate, or where competing brands have a high degree of similarity, the challenge of selecting a specific product based solely on its attributes such as price, features, or perceived quality, can be facilitated by the additional offer of a guarantee (Murthy & Djamaludin, 2002).

For companies, on the other hand, guarantees can also function as a protection and additionally as a promotion (Menezes & Quelch, 1990; Murthy & Djamaludin, 2002; Alqahtani & Gupta, 2017). In terms of their defensive, protective role, guarantees serve to



facilitate the resolution of potential disputes by specifying in advance in the terms and conditions exactly which defects are covered by the guarantee (Menezes & Quelch, 1990; Murthy & Djamaludin, 2002; Alqahtani & Gupta, 2017). Considering their promotional function, guarantees can be viewed as a valuable and potentially effective marketing tool employed with the goal to enhance sales, market share, profits, product differentiation, and new product adoption (Menezes & Quelch, 1990; Alqahtani & Gupta, 2017). Existing literature and multiple empirical studies (Wiener, 1985; Menezes & Quelch, 1990; Boulding & Kirmani, 1993; Murthy & Djamaludin, 2002; Owen, 2004) indicate that guarantees signal quality, reliability, and durability, which helps to reduce consumers' perceived risk in their purchase decision process (Wirtz & Kum, 2001). As a result, they can also lead to a higher probability of purchase (Menezes & Quelch, 1990; Moorthy & Srinivasan, 1995; Murthy & Djamaludin, 2002; Alqahtani & Gupta, 2017).

Furthermore, guarantees are an integral part of a company's after-sales service and have the potential to enhance customer satisfaction, brand loyalty, brand image, and brand value (Menezes & Quelch, 1990; Rigopoulou et al., 2008; Shamami & Kheiry, 2019; Mathur, 2022). Oftentimes, customers are required to personally register in order to activate the guarantee (e.g., Merida, Craghoppers, Dynafit), which allows the company to keep in contact with their customers and thus facilitates their customer relationship management. Moreover, guarantees can serve as a means to promote future sales to current customers; for example, in case customers return for guarantee services, companies are provided with an opportunity to sell further products (Owen, 2004; Menezes & Quelch, 1990). In addition, it can also promote future sales to other consumers by encouraging positive word of mouth (Wirtz & Kum, 2004). Following the reasoning of Wirtz & Kum (2001, 2004), companies must offer more reliable products in order to provide more extensive guarantees, which, conversely, means that companies with less reliable products cannot offer such a guarantee without incurring significant costs. Thus, offering extended or even lifetime guarantees can potentially allow companies to gain a competitive advantage (Menezes & Quelch, 1990; Wirtz & Kum, 2001, 2004) and an increased market value (Meyer et al., 2013).

According to Menezes and Quelch (1990), a company offering a guarantee shows faith in its products, which can, *inter alia*, be inspired by corporate social responsibility, because it takes accountability for product quality and provides a way for customers to claim this promise. Consequently, a lifetime guarantee would signal exceptional confidence which could be driven by a concern for both qualitative and environmental sustainability. At the same time,

consumers might be incentivized to consume less by keeping their products longer, while firms are being incentivized to improve their product reliability (Menezes & Quelch, 1990).

However, offering guarantees can also present some challenges and potential problems for businesses and consumers. Administrative difficulties may arise at various levels, such as in adjusting and applying guarantee terms in international business (Your Europe, 2022), in complying with guarantee policy legislation (Murthy & Djamaludin, 2002), and in disputes between customers and businesses about guarantee claims, particularly about the scope of lifetime guarantees (Engel, 2011; Richard, 2015; Rose, 2020). Furthermore, the financial risk associated with guarantees, in particular lifetime guarantees, represents another disincentive for companies. Guarantees can lead to additional costs at multiple levels such as design, production, sales, and service, and are, especially in regard to the latter, difficult to assess in advance, which can consequently impact a firm's profits (Murthy & Djamaludin, 2002; Owen, 2004; Alqahtani & Gupta, 2017). The operational complexity of the implementation and management of guarantee programs can also imply additional costs (Menezes & Quelch, 1990).

The potential positive effect of guarantees on customer satisfaction has already been outlined, but consumers' expectations might be hard to meet if a guarantee offers quality for a lifetime. If the scope and length is not clearly defined, as is often the case with lifetime guarantees, or promises are not kept, dissatisfaction may arise and potentially lead to a negative impact on brand reputation (Owen, 2004). Moreover, consumers could feel irritated and deceived by exceedingly restrictive guarantees containing "limitations, conditions, exceptions, or other restrictions" in the fine print (Menezes & Quelch, 1990, p. 77).

Therefore, based on these insights, the first hypothesis is formulated as follows:

*H1: An unlimited lifetime guarantee will lead to more favorable attitudes towards a brand compared to a limited lifetime guarantee.*

## 2.2 Signaling Quality with Guarantees

As mentioned before, guarantees can be interpreted as signals of a "firm's confidence in the quality of its products" (Stiglitz, 2000, p. 1453; Homburg, 2020). In many instances, quality, "broadly defined as superiority or excellence" (Zeithaml, 1988, p. 3), cannot be evaluated by consumers before the purchase of a product, whereas companies are naturally aware of it, resulting in "the well-known problem of *information asymmetry*" between buyer and seller (Spence, 1973, 2002; Erdem & Swait, 1998; Rao et al., 1999, p. 259; Kirmani & Rao, 2000;

Connelly et al., 2011; Homburg, 2020). Measures to reduce this information asymmetry are signaling and screening (Homburg, 2020). Signals are defined as “the observable, alterable attributes that the business can invest in to communicate superior but unobservable or hidden ex-ante and complex attributes of the product being offered, which are primarily quality and the promise of customer satisfaction” (Smith and Font, 2014, p. 944). Signaling theory, rooted in information economics, has been studied in marketing and consumer behavior research, inter alia, in the context of advertising, price, brand name, and guarantees (Kirmani & Rao, 2000; Pires Goncalves, 2008). Marketing literature suggests that consumers infer quality from various product attributes, which can be divided into intrinsic and extrinsic cues (Olson & Jacoby 1972; Rao & Monroe, 1989; Pires Goncalves, 2008). Intrinsic cues refer to product attributes that are inherently tied to the physical characteristics of the product, so that an alteration of these characteristics would simultaneously modify the product itself (Olson & Jacoby, 1972). Extrinsic cues, on the other hand, refer to product-related attributes outside of the physical product, so that a change of these features would not inevitably alter the product itself (Olson & Jacoby, 1972). As an extrinsic cue, a guarantee does not influence the factual quality, but the perceived quality, which is “defined as the consumer’s judgment about a product’s overall excellence or superiority” (Zeithaml, 1988, p. 3).

As in other areas, there is a dynamic between signalers (i.e., sellers) and receivers (i.e., buyers) in marketing, where their interests partially conflict (Connelly et al., 2011). This conflict arises because “successful deceit would benefit signalers at the expense of the recipients” (Bird & Smith, 2005, p. 224), meaning that by sending false signals about, for example, quality, a company could mislead consumers into purchasing products they might not have bought had they had access to complete information. Thus, inferior signalers are motivated to engage in cheating behavior, which involves intentionally generating false signals in order to deceive receivers into selecting them (Johnstone & Grafen, 1993; Connelly et al., 2011). However, it can be detrimental to companies to falsely signal high quality, because this puts their reputation and future profits at risk (Erdem & Swait, 1998; Rao et al., 1999; Kirmani & Rao, 2000). According to Rao et al. (2013), the signal of a guarantee can be very costly to a dishonest seller who has to fulfill the guarantee claims should the product not meet the requirements, while it does not cause any additional costs to a company, if it is honest in what it promises. Similarly, a company that sells products of lower quality will be confronted with more frequent repairs and therefore higher costs for the same guarantee compared to a firm offering higher quality goods, and thus offer a less extensive guarantee (Kirmani & Rao, 2000). Consequently, low-quality firms are less likely to signal when

signaling costs are high (Kirmani & Rao, 2000; Smith & Font, 2014), while claims of high, unobservable quality are more likely to be true (Rao et al., 1999), so that “rational consumers can infer unobservable quality from the level of guarantee coverage” (Kirmani & Rao, 2000, p. 72). Accordingly, offering a lifetime guarantee will provide an attractive and efficient signal only for truthful companies, as a guarantee extension will increase costs if the product does not perform correspondingly better (Murthy & Djamaludin, 2002).

Apart from this economic signaling theory approach, various studies have investigated the signaling effect of guarantees on consumer behavior and delivered empirical evidence. Wiener (1985) found that guarantee extensions increase the perceived reliability of consumer durables and motor vehicles. Menezes and Quelch (1990) claim that “excessively long warranties may lack credibility, especially if the firm does not have a good reputation” (p. 73). According to the study of Boulding and Kirmani (1993), longer guarantees can lead to perceptions of higher overall quality and decreased likelihood of breakdown, as well as higher purchase intentions, depending, however, on the characteristics of the firm. They found that these effects hold true only for high-credibility firms, whereas for low-credibility firms, longer and unconditional guarantees decreased overall quality perceptions in relation to high-credibility firms, providing empirical evidence for the suggestion that extended guarantees are an effective strategy for influencing quality perceptions only when credibility is high (Boulding & Kirmani, 1993).

Reasons to influence the perception of quality are manifold. According to Olson and Jacoby (1972) “quality perception seems to be strongly related to actual purchasing behavior”. In the process of developing a multidimensional measure of perceived product quality, Stone-Romero et al. (1997) found that their perceived quality measure predicted a willingness to buy criterion. In addition, the study from Tsotsos (2005) found that perceived quality had a direct and indirect effect through overall satisfaction on purchase intentions. Olshavsky and Miller (1972) conducted an experiment about the effect of over- and understatement of product quality and found that an overstatement led to more positive quality evaluations compared to an understatement. The study of Erdogmus and Budeyri-Turan (2011) could confirm their hypotheses that perceived product quality has a significant and positive effect on the formation of brand loyalty and brand attitude, indicating that the perception of quality is crucial for consumers’ preferences. Accordingly, the quality signaled by guarantees should also have a positive effect on brand attitudes. As a frequently investigated concept in marketing research, brand attitudes, defined as “individuals’ internal evaluations of the brand” (Mitchell & Olson, 1981, p. 318), were chosen as the subject of the study because of their

potential as a proxy for various consumer behavior related success indicators (Mitchell & Olson, 1981), such as purchase intentions (e.g., Haley & Case, 1979; Anand & Sternthal, 1990; Spears & Singh, 2004; Wang & Tsai, 2014), reputation (e.g., Jung & Seock, 2016), and word of mouth (e.g., Herold et al., 2016; Kundu & Rajan, 2016).

Based on these insights, offering a longer guarantee in the form of a lifetime guarantee should generally lead to increased quality perceptions and brand evaluations, but only if the credibility of the firm respectively the message is not compromised. Since a lifetime guarantee is already a strange and unusual offer and tempts one to think about the exact conditions that go along with it, the slightest hint that might cast doubt on its credibility could lead to the guarantee not functioning successfully as a quality signal.

Based on the literature on guarantees as quality signals and their positive influence on attitudes towards a brand, the second hypothesis is thus formulated as follows:

*H2: The effect of a lifetime guarantee on brand attitudes is mediated by the perceived product quality. An unlimited lifetime guarantee is likely to increase quality perceptions and thus favorably influence brand attitudes compared to a limited lifetime guarantee.*

Lifetime guarantees are used as marketing instruments, and as such, their evaluation may depend on the personality traits of the consumer (Srivastava & Kamdar, 2009; Adjei & Clark, 2010). They are aimed at building and improving customer relationships and enhancing customer retention (e.g., Wirtz & Kum, 2004; Hidaka et al., 2018), and thus trying to target loyal customers respectively create brand loyalty (Adjei & Clark, 2010)—not necessarily in the form of repurchases, but in the form of sticking to one, durable, high quality product. However, aiming for high quality products is not the only way consumers seek to maximize the satisfaction they derive of their consumption (Helmig, 2013). Another way in which a consumer can increase utility (i.e., “the total satisfaction or benefit derived from consuming a good or service”; Investopedia, 2022), is by seeking variety in their consumption behavior (Helmig, 2013). In the literature, variety seeking is sometimes referred to as the “antithesis” of brand loyalty (e.g., Woratschek & Horbel, 2006; Peter & Olson, 2008; Sheorey et al., 2013; Koschmann & Sheth, 2017; Hidaka et al., 2018), and indeed, it has already been found that the effectiveness of relationship marketing aimed at increasing loyalty is moderated by variety seeking behavior (Adjei & Clark, 2010). Thus, the consumption of a lifetime guarantee product seems to be at odds with the desire for variety, raising the question of whether the positive effect of unlimited lifetime guarantees also applies to variety seekers.

### 2.3 Variety Seeking

Varied behavior can occur in different aspects of people's lives, such as in seeking variation in activities (e.g., hobbies, holiday destinations), in consumption, or even partners (McAlister & Pessemier, 1982; Hill et al., 2015). It provides a way to overcome routinization, which can be helpful at first, but potentially results in "feelings of monotony and boredom" (Menon & Kahn, 1995, p. 285). In the context of purchase behavior, variety seeking can be defined as the consumers' inclination to vary their choices of products and services, for example, by aiming for a diverse "portfolio of options to satisfy their needs" (Kahn, 1995, p. 139).

Various studies indicate that we are living in times that are particularly prone to variety seeking behavior due to the the current socio-political and economic developments. For one, a study found that variety seeking increases with heightened perceptions of threat, specifically in the context of the Covid-19 pandemic (Kim, 2020), as it provides a means to enhance feelings of freedom and control in times of crises (Levav & Zhu, 2009; Yoon & Kim, 2018). Kim (2020) suggests that this reaction may also apply in other threatening situations, of which there are currently a multitude observable, be they political instability or armed conflicts, environmental threats, or rising inflation and economic crises. In line with the latter, Yoon & Kim (2018) found that variety seeking increases when perceived economic mobility is low. Secondly, variety seeking behavior was found to be stronger in individualistic cultures than in collectivistic cultures (Kim & Drolet, 2003). The worldwide increase of individualistic practices and values could therefore indicate a trend toward variety seeking (Santos et al., 2017; Olsen, 2021; Zukunftsinstitut, 2023). Third, it has been shown that variety seeking increases when there is a large number of brand alternatives in a product category available (Tang & Chin, 2007). Accordingly, our saturated markets with many interchangeable products that are difficult to differentiate in terms of actual quality (Kroeber-Riel & Gröppel-Klein, 2019) seem to favor variety seeking behavior.

McAlister and Pessemier (1982) offered one of the first classifications of varied behavior with regard to the underlying motivation, differentiating between derived and direct behavior. The *derived varied behavior* results from influences not related to an individual's preference for variety and can be explained by the emergence of multiple needs, for example, multiple users, uses, or situations, or a change in the choice problem, for instance, a change of the available supply or a shift in circumstances restricting the decision (McAlister & Pessemier, 1982). *Direct varied behavior*, on the other hand, refers to the desire for novelty and change because of the inherent satisfaction consumers derive from it (McAlister & Pessemier, 1982). This

direct motivation can be further divided into intrapersonal and interpersonal motives, meaning it can be attributed to internal causes or external causes (McAlister & Pessemier, 1982).

The *external, interpersonal causes* for seeking variety can take on various forms, such as the “desire for group affiliation or individual identity”, meaning that consumers vary their behavior in order to stand out or fit in, as is the case, for example, in the context of status or fashion consumption (McAlister & Pessemier, 1982, p. 316). According to this logic, variety seeking might depend on the product category, which could be confirmed by various studies, suggesting, that even on an intrapersonal level, variety seeking differs across product categories (e.g., Givon, 1984; Mazursky et al., 1987; Raju 1984; Van Trijp & Hoyer 1991; Van Trijp et al., 1996). The study of Van Trijp et al. (1996) identified certain product category-level characteristics that enhance variety seeking behavior, namely lower involvement, higher purchase frequency, smaller perceived differences in choice alternatives, greater hedonic characteristics, and lower preference strength, suggesting that these attributes influence the effectiveness of a marketing strategy aimed at attracting variety seeking customers. At the same time, products characterized by these properties seem to be less suitable for guarantees, as guarantees are typically offered for products with opposite characteristics (i.e., lower purchase frequency, less hedonic characteristics, and higher involvement), for example, durable goods. Nonetheless, there are companies in these variety-seeking-prone product categories that offer lifetime guarantees (e.g., Patagonia, The Northface, Tilley Hats). However, based on this logic, it seems questionable whether this strategy is effective in targeting variety seekers.

An *internal, intrapersonal cause* for variety seeking can be, for example, the optimal stimulation level (McAlister & Pessemier, 1982). Optimal stimulation level refers to an individual’s characteristic reaction to environmental stimuli; more specifically, each person has a preferred level of stimulation and strives to attain this level by reducing stimulation when it is too high or increasing it when it is too low (Raju, 1980). Accordingly, individuals with a low optimal stimulation level tend to avoid new stimuli by seeking familiar situations, while those with a high optimal stimulation level are more inclined to seek out new experiences, and thus, variety in their behavior (Zuckerman, 1979; Raju, 1980; Steenkamp & Baumgartner, 1996). People in need of more stimulation respectively variety have been found to “feel less threatened by ambiguous stimuli and are more likely to respond than withdraw from such stimuli”, and, as they tend to be greater risk takers and nonconformists, are therefore more likely to accept unusual products and services (Zuckerman, 1979; Raju, 1980, p. 280). According to this, ambiguous claims such as limited lifetime guarantees might not be

perceived as threatening and risky. Furthermore, as Helmig stated (2013), variety seekers derive customer value primarily from frequently changing products instead of aiming for higher quality in their consumption, whereas companies try to increase brand loyalty by providing customer value in the form of quality and benefits (Sheorey et al., 2013). Therefore, unlimited lifetime guarantees may function less efficiently as risk-reducing quality signals for variety seekers; on the one hand, because the “semantic inconsistency” of limited lifetime guarantees may be perceived less strongly and thus less threatening respectively misleading, and on the other hand, in view of the intention to vary anyway, perceptions of quality may lose importance and consequently their influence in the overall evaluation of a brand.

Thus, the third hypothesis is formulated as follows:

*H3: The positive indirect effect of unlimited lifetime guarantees on brand attitudes, mediated by quality perceptions, is moderated by variety seeking tendency. An increase in variety seeking weakens both the effect of unlimited lifetime guarantees on quality perceptions and the effect of quality perceptions on brand attitudes.*

McAllister and Pessemier’s classification of motivations driving variety seeking behavior was extended by Kahn (1995). Apart from *external situations* (cf. derived varied behavior) and *satiation/stimulation* (cf. direct varied behavior), *future preference uncertainty* is proposed as an additional cause for seeking variety in consumption (Kahn, 1995). Various studies have shown that when consumers anticipate future preferences, they seek more variety in order to provide against the uncertainty of possible changes in taste or mood (Simonson, 1990; Kahneman & Snell, 1990; Walsh, 1995). Simonson (1990) found that consumers who have to choose multiple products for future consumption exhibit more variety in their choices than consumers who choose the products for immediate consumption. Moreover, in a different context but applicable in this situation, Sun et al. (2021) found that consumers will tend to spend the same budget on multiple, ordinary products instead of fewer, higher-end products. In their study, they showed that this can be explained by product durability neglect, but suggested variety seeking and risk aversion as potential alternative explanations (Sun et al., 2021). By implication, variety seekers should tend to be more uncertain about their future preferences and exhibit more variety in their purchasing behavior when accounting for future consumption, as is also suggested by Simonson (1990). Accordingly, if variety seekers are confronted with the choice of a “lifetime product”, this could evoke associations about future consumption, prospective preferences, and the uncertainty related to both. If an unlimited lifetime guarantee promises a product to last forever, this might limit the consumer’s



perceived future consumption choices. The study from Menon and Kahn (1995) showed that by offering more product options and thus providing more stimulation in the choice context, variety seeking could be reduced. Conversely, when the offer, in the form of an unlimited lifetime guarantee product, provides no choice of alternatives for future consumption, the need to seek variety should increase. Making such a “final commitment” would mean forgoing other alternatives, which would increase variety seekers’ perceived risk associated with anticipated changes in tastes (Simonson, 1990). Thus, unlimited lifetime guarantees could possibly lead to less positive evaluations from variety seekers. In this regard, a limited lifetime guarantee would indicate that the product does not last forever, but instead focuses on a typical lifespan of a product, and therefore would not “limit” them as much in their perceived future choices. It would offer them a choice of future alternatives, an opportunity respectively the legitimization to switch to other products and brands after the guarantee period has expired. Since variety seeking is also employed as a strategy to reduce risk when consumers are confronted with uncertainty regarding future preferences (Simonson, 1990), a limited lifetime guarantee could thus reduce the perceived risk of being stuck with a product that no longer aligns with variety seekers’ changing preferences compared to an unlimited lifetime guarantee.

Thus, the last hypothesis is formulated as follows:

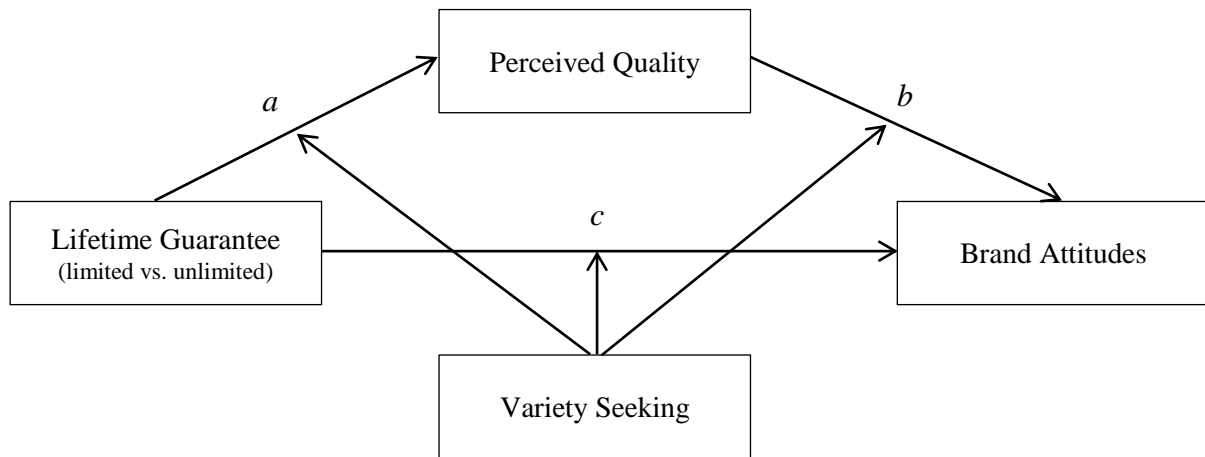
*H4: The positive direct effect of unlimited lifetime guarantees on brand attitudes is moderated by variety seeking, reversing the effect with an increase in variety seeking.*

## 2.4 Conceptual Model

The following conceptual model shall illustrate the hypothesized relationships previously discussed in the literature review. The model shows the effect of unlimited versus limited lifetime guarantees (IV) on consumers’ attitudes towards the brand (DV), mediated by the perceived quality signaled through the guarantee, and moderated by variety seeking. It is first assumed that an unlimited lifetime guarantee leads to more positive attitudes towards the brand than a limited lifetime guarantee (H1). This positive effect is mediated by quality perceptions (H2). However, the positive effect of unlimited lifetime guarantees is moderated by variety seeking tendency; it is assumed that variety seeking will weaken both the effect of unlimited lifetime guarantees on perceived quality and the effect of quality perceptions on brand attitudes (H3). Thus, the positive direct effect of unlimited lifetime guarantees on brand attitudes is moderated by variety seeking, reversing the effect with an increase in variety seeking (H4).

**Figure 1.**

*Conceptual Model*



### 3 Method

A sample of 177 consumers ( $M_{Age} = 35.35$ ,  $SD_{Age} = 14.60$ , 38.64% male, 57.38% female, 2.26% other, 1.72% no answer) was recruited in Austria and took part in the online experiment via the survey software Qualtrics. After a brief introduction, participants were randomly presented with one of two stimuli. As such, two different advertisements using lifetime guarantee appeals were designed, one displaying an unlimited lifetime guarantee as the experimental condition, the other showing a limited lifetime guarantee as the control condition (Figure 2). The between-subjects design was chosen in order to increase internal validity by reducing potential demand characteristics and randomization was used in order to reduce systematic error and meet the requirements for the following statistical tests (Babin & Zikmund, 2016; Field, 2018; Stoner et al., 2022). In addition, a fictitious brand name, “PAK”, was created for the advertisement in order to avoid potential associations. The ad showed a picture of a suitcase accompanied by a short advertising text which referred to the quality of the products and the extent of the guarantee (Figure 2). While the design and first part of the message remained the same for both conditions, the manipulation focused on the second part of the message in which the limitation of the lifetime was stressed, adding an asterisk and small print to the limited lifetime guarantee appeal to further enhance the perception of the restrictive conditions of this guarantee. In the experimental condition, the restrictive messages were removed, and instead a brief reference to the unconditionality of the guarantee was given.

Subsequently, respondents’ attitudes towards the brand and perceived product quality as well as their variety seeking tendency were assessed. In order to measure quality perceptions, the seven-point likert scale used by Erdogmus and Büdeyri-Turan (2012) was employed, but

slightly adapted. The measurement included six items, leaving out two of the original items about appearance cues and instead focusing on the perceived performance. The respondents' brand attitude was measured with the seven-point semantic differential scale developed by Spears and Singh (2004), including five items. To measure the variety seeking tendency of the respondents, the scale developed by Steenkamp and Baumgartner (1995) was used. Two items were omitted as in the studies of Olsen et al. (2015) and Sharma et al. (2010), because they tended to be leading and loaded. Appendix B provides the exact items and reliability statistics of all scales. Lastly, a manipulation check was conducted to assess the effectiveness of the manipulation of the independent variable, followed by the collection of demographic data.

**Figure 2.**

*Stimulus Material*



*Note.* Lifetime guarantee advertisements with and without limitations. Adapted from istock/Customdesigner, 2017

## 4 Results

Before conducting the simple mediation and moderated mediation analysis, the underlying assumptions, that is, independence, linearity, homoscedasticity, multicollinearity, and normality (Hayes, 2018; Clement & Bradley-Garcia, 2022), had to be tested and were found to be met (Appendix C).

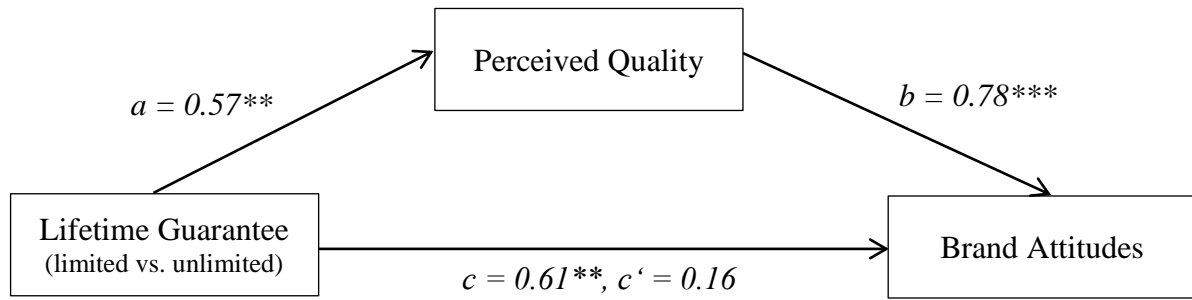
Furthermore, an independent samples *t*-test was conducted to assess the manipulation check. Respondents were asked to recall the ad and indicate on a seven-point likert scale the extent to which they would agree (*1 = not at all, 7 = very much*) with the following statement: “The brand PAK offers a lifetime guarantee without any limitations”. As shown by the significant difference in mean values, respondents in the unlimited lifetime guarantee condition agreed with this statement more often ( $N = 92, M = 5.97, SD = 1.38$ ) than those in the limited lifetime guarantee condition ( $N = 85, M = 2.93, SD = 1.99; t(175) = -11.87, p < .001, d = 1.70$ ). These results indicate that the manipulation of the advertisement was successful (Appendix D).

### 4.1 Simple Mediation

To test the first two hypotheses, the effects of the lifetime guarantee appeal (IV) on brand attitudes (DV) via quality perceptions (MED), a simple mediation analysis was performed using model 4 of the PROCESS macro (Hayes, 2022) with 5000 bootstrapped samples. The results of the total effect indicate that participants in the unlimited lifetime guarantee condition reported significantly higher brand attitudes ( $M_{unlimited} = 5.23, SD_{unlimited} = 1.19$ ) compared to those in the limited lifetime guarantee condition ( $M_{limited} = 4.62, SD_{limited} = 1.45; b = 0.61, t(1, 175) = 3.03, \text{Cohen's } d = 1.32, p = .003, 95\% \text{ CI } [0.21, 1.01]$ ), therefore, Hypothesis 1 can be accepted. Furthermore, the unlimited lifetime guarantee lead to higher quality perceptions ( $M_{unlimited} = 5.36, SD_{unlimited} = 1.02$ ) than the limited lifetime guarantee ( $M_{limited} = 4.79, SD_{limited} = 1.27; b = 0.57, t(1, 175) = 3.28, \text{Cohen's } d = 1.15, p = .001, 95\% \text{ CI } [0.23, 0.92]$ ). Subsequently, higher quality perceptions lead to more favorable brand attitudes ( $b = 0.78, t(2, 174) = 14.43, p < .000, 95\% \text{ CI } [0.67, 0.89]$ ). The indirect effect of the unlimited vs. limited lifetime guarantee via quality perceptions on brand attitudes was positive and significant ( $b = 0.45, SE = 0.14, 95\% \text{ CI } [0.18, 0.72]$ ), whereas the direct effect of lifetime guarantees on brand attitudes was not significant ( $b = 0.16, t(174) = 1.10, p = 0.27, 95\% \text{ CI } [-0.13, 0.45]$ ). This indicates that unlimited lifetime guarantees increase consumers' brand attitudes by eliciting higher quality perceptions. Thus, Hypothesis 2 can be accepted.

**Figure 3**

*Regression coefficients for relationships of the simple mediation model*



*Note.* \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$

## 4.2 Moderated Mediation

In order to investigate the moderating influence of variety seeking on the previously analyzed relationships, a moderated mediation analysis was conducted using model 59 of Hayes' PROCESS macro (2022). In accordance with the results from the preceding simple mediation analysis, the output shows that the unlimited lifetime guarantee led to higher quality perceptions ( $b = 0.57$ ,  $t(173) = 3.27$ ,  $p = .001$ , 95%  $CI$  [0.23, 0.92]), which in turn positively influenced brand attitudes ( $b = 0.77$ ,  $t(171) = 13.33$ ,  $p < .000$ , 95%  $CI$  [0.66, 0.89]), whereas the direct effect of lifetime guarantee on brand attitudes was once again not significant ( $b = 0.17$ ,  $t(171) = 1.12$ ,  $p = .27$ , 95%  $CI$  [−0.13, 0.47]). Contrary to Hypotheses 3 and 4, however, the results show no significant interaction effects for the single paths. Variety seeking did not moderate the relationship between lifetime guarantee and quality perceptions ( $b = 0.29$ ,  $t(173) = 1.70$ ,  $p = 0.09$ ,  $R^2 = 0.02$ , 95%  $CI$  [−0.05, 0.62]), nor did it moderate the relationship between perceived quality and brand attitudes ( $b = -0.01$ ,  $t(171) = -0.18$ ,  $p = 0.86$ ,  $R^2 = 0.00$ , 95%  $CI$  [−0.11, 0.09]). Furthermore, no significant moderation could be found for the relationship between lifetime guarantee and brand attitudes ( $b = 0.10$ ,  $t(171) = 0.68$ ,  $p = 0.49$ ,  $R^2 = 0.00$ , 95%  $CI$  [−0.19, 0.41]). Hayes (2018) points out that these interaction effects are decisive in confirming moderation, and probing the interaction by a further inspection of the conditional effects and conducting a simple slopes analysis should only be done if the interaction effects are significant (Field, 2018). Since these are not significant, no moderation can be confirmed, thus leading to the rejection of Hypotheses 3 and 4.

## 5 Discussion

Given that lifetime guarantees are usually offered for a limited period of time or with numerous conditions, which repeatedly brings them under criticism and potentially entails negative consequences for businesses (e.g., Tims, 2017, 2019; Rose, 2020; Tatum, 2023), the purpose of this study was to investigate whether the less restrictive but costlier unlimited lifetime guarantee actually leads to more favorable brand attitudes than the more frequently used but somewhat controversial limited lifetime guarantee. In order to explain this effect, signaling theory was applied to study the mediating role of quality perceptions. An additional aim was to determine boundary conditions for this assumed positive effect by examining whether it would hold for variety seekers, who appear to be on the rise, or whether the mediation effect would weaken and the direct effect would be reversed. The findings of the study could confirm some of the hypotheses, and shall be discussed closely in the following.

### 5.1 Summary of the Findings

The results of the analysis showed that the unlimited lifetime guarantee led to a significant positive effect on brand attitudes compared to the limited lifetime guarantee, confirming Hypothesis 1. These findings are consistent with the studies introduced in the literature review (e.g., Wiener, 1985; Boulding & Kirmani, 1993), which found that longer guarantees generally lead to more positive brand evaluations. At first glance, the results seem obvious. But with the novel application to “lifetime guarantees”, this study was able to dispel to a certain degree some authors’ doubts about the effectiveness and credibility of “excessively long” or unconditional guarantees (e.g., Menezes and Quelch, 1990; Boulding & Kirmani, 1993). Furthermore, the simple mediation analysis could confirm that the positive effect of unlimited lifetime guarantees on brand attitudes is mediated by quality perceptions, thus supporting Hypothesis 2. Respondents perceived the quality of the product with the unlimited lifetime guarantee as better than those in the control condition, which subsequently led to more favorable brand attitudes.

However, the moderated mediation analysis revealed no significant moderation of variety seeking on the direct and indirect relationships between the two lifetime guarantee conditions, quality perceptions, and brand attitudes. The data suggest that a variety seeking tendency neither reduces the strength of the relationship between the lifetime guarantee and quality perceptions or the relationship between the quality perceptions and brand attitudes, nor does it

reverse the relationship between lifetime guarantee condition and brand attitudes. Thus, Hypotheses 3 and 4 had to be rejected. There are several possible explanations why these results turned out contrary to the initial expectation. On the one hand, based on the results that quality perceptions and subsequent brand attitudes did not differ depending on the level of variety seeking, it appears that quality is just as important for variety seekers in evaluating a brand as it is for habit-oriented, loyal consumers. This could indicate that a consumer, who derives their benefits primarily from variation and diversity (Helmig, 2013), and who is, moreover, not necessarily motivated to repurchase a product by being offered higher quality (Woratschek & Horbel, 2006), would not automatically neglect quality altogether. Apparently, a desire for variation and an appreciation of quality are not mutually exclusive, at least for variety seekers in this study. This could also explain why, at different levels of variety seeking, the effect of lifetime guarantees on perceived quality did not change significantly. On the other hand, a moderation effect might not have occurred for various reasons related to the design and implementation of the study. For instance, Menidjel et al. (2017) suggest that “contexts of low involvement may not be sufficient to investigate the moderating effects of consumer personality traits” (p. 642). Accordingly, a potential lack of involvement among the respondents may explain the insignificant results for the moderating effect. Even though experiments induce a certain degree of situational involvement (Babin & Zikmund, 2016; Kroeber-Riel & Gröppel-Klein, 2019), other factors, such as a respondents’ lack of interest in the product category, the absence of incentives (Abdelazeem et al., 2023), or distractions due to multitasking, which younger respondents—who predominated in the study—are especially prone to (Zwarun & Hall, 2014), could have resulted in lower levels of involvement among the participants, and thus may have prevented the occurrence of a moderation effect. Moreover, moderation could have been inhibited due to the type of product chosen for the stimulus. As previously discussed, variety seeking has been shown to increase depending on certain product-level characteristics, such as higher purchase frequency and greater hedonic features, the latter especially in combination with sensory attributes (Trijp et al., 1996; Baltas et al., 2017). Conversely, an infrequently purchased, utilitarian, functional product like a suitcase might be less susceptible to variety seeking, and consumers with such a tendency might prioritize quality in this particular context over seeking novelty, as the results would suggest.

## 5.2 Theoretical Implications

The findings of this study provide several theoretical implications for marketing research. While previous works have focused on investigating the effects of guarantee extensions, the particular variant of the lifetime guarantee had not yet been explored. Lifetime guarantees differ from extended guarantees in that the promoted *lifetime* is rarely specified and is often interpreted differently by both companies and consumers, potentially creating misunderstandings and thus negative consequences for companies (Tims, 2019; Rose, 2020; Tatum, 2023). Therefore, the goal of this study was to provide initial empirical insights about different variations of lifetime guarantees and their impact on consumer behavior. The results of the mediation analysis largely build on the existing evidence of the quality signaling potential of guarantees (e.g., Wiener, 1985; Kirmani & Boulding, 1993). Based on the findings of Boulding and Kirmani (1993) that a guarantee extension in combination with an unconditional scope would lead to increased quality perceptions only for firms with high credibility, it can be deduced that the lifetime guarantees respectively the fictitious brand used in this study did not lack credibility. Whether the results contradict the assumption that excessively long guarantees lack credibility (Menezes & Quelch, 1990) cannot be said with certainty due to the study design, since both the experimental and control group investigated very long guarantees. However, assuming that unlimited lifetime guarantees are theoretically less realistic than limited ones, and could therefore also lack credibility, at least in the context of this study, the results indicate that they do not seem to evoke such associations as they lead to better evaluations. Furthermore, in line with existing literature (e.g., Kelley, 1988; Menezes & Quelch, 1990; Suwelack et al., 2011), the data contribute to the understanding of consumer attitudes towards a brand offering guarantees that include limitations and restrictions. Accordingly, limitations and restrictions in the form of small print worsen the perceived quality, at least in comparison to unrestricted guarantees. Thus, the outcomes add to the prevailing body of research a potential explanation of the negative effects of limitations and restrictions by identifying reduced quality perceptions as a mediator.

Even though the study did not find a significant moderation of variety seeking, the experiment did provide a new approach by shedding some light on the relationship between variety seeking and marketing strategies promoting durable quality and thus, in a broader sense, sustainability. Previous studies about variety seeking have mainly focused on brand loyalty and brand switching behavior (e.g., Trijp et al., 1996; Adjei & Clark, 2010; Sheorey et al., 2013; Menidjel et al., 2017; Hidaka et al., 2018), and while some recent papers have speculated about a potential relation between variety seeking and sustainable consumption



(e.g., Sun et al., 2021), in particular variety seeking being an inhibitor to sustainable consumption, no paper addressing this relationship could be found. At least for this type of study design with the use of a self-administered questionnaire, durability and quality signals in the form of unlimited lifetime guarantees seem to be perceived equally by variety seekers and loyal, habit-oriented consumers, and consequently result in similar brand attitudes. However, this theoretical appreciation of quality and durability might not be reflected in real behavior: Various reports (e.g., Hosp, 2020; Bürger & Paulinger, 2022; OTS, 2023) show that consumers currently attach particular importance to durability and reparability. Since durability can also be understood as a dimension of sustainability (Sun et al., 2021), these attitudes could—analogue to the well-known phenomenon of the attitude-behavior gap in the context of sustainable consumption (e.g., ElHaffar et al., 2020)—also differ from actual behavior in the area of consumption of durable products. In combination with a certain susceptibility towards social desirability bias in self-report studies (Durmaz et al., 2020), respondents whose desire for variety may be getting in the way of their sustainable consumption efforts (Sun et al., 2021), might have been more inclined to rate long-living products more favorably irrespective of their actual purchase behavior.

In summary, the study extends the extant guarantee literature by refining the understanding of the suitability of using lifetime guarantees as quality signals. It has also shown that, at least in the product-specific context of this work, a variety seeking tendency does not have a significant effect on the assessment of lifetime guarantees, and it thus demonstrates the need for further research in this area.

### 5.3 Practical Implications

The results should also be taken into account by business practitioners, especially when considering how to design a lifetime guarantee service. First of all, unlimited lifetime guarantees are an efficient tool to signal quality and improve consumers' attitudes towards the brand, which explains the increasing popularity of such services (O'Connell, 2016) among companies (e.g., Darn Tough Socks, Le Creuset, Patagonia, Briggs & Riley, GoRuck, Red Oxx, Timbuk2, Davek Umbrellas, Tervis). In addition, recent surveys (e.g., Hosp, 2020; Bürger & Paulinger, 2022; OTS, 2023), the emergence of platforms promoting and selling durable product alternatives (e.g., Buy Me Once), and the growing literature on anti-consumption and voluntary simplicity (e.g., Makri et al., 2020; Lee, 2022; Cherrier & Lee, 2023) illustrate the increasing importance of durability for consumers. However, unlimited

lifetime guarantees are not an option for all companies due to the higher costs, complex implementation, and sometimes lacking technical feasibility involved. Since limited lifetime guarantees perform worse in comparison, restrictions and limitations regarding the time frame should be handled with caution. Therefore, companies should carefully consider whether using the label “lifetime” is sensible if the guarantee is actually limited to a few years.

Secondly, lifetime guarantees seem to be a good marketing strategy for various types of companies. Multiple studies have shown that exceptionally strong guarantees are effective quality signals not only for prominent, high-reputation firms (e.g., Boulding & Kirmani, 1993; Srivastava & Mitra, 1998; Purohit & Srivastava, 2001; Akdeniz et al., 2013), but also for weakly familiar, lesser known companies (e.g., Innis & Unnava, 1991; Blair & Innis, 1996; Dutta et al., 2022), indicating that lifetime guarantees should be efficient tools for companies irrespective of their familiarity. Furthermore, literature (Kahn et al., 1988; Kahn, 1995) suggests that large-preference brands (i.e., brands that enjoy a strong preference among consumers) should encourage brand loyalty while small-preference, niche, or new brands should encourage variety seeking behavior in order to attract new consumers. With unlimited lifetime guarantees seemingly viewed positively independent of a variety seeking tendency, this strategy appears to be appropriate for companies regardless of their established level of preference among consumers. In other words, it seems plausible that large-preference brands, such as Patagonia, should be able to keep their customers loyal and satisfied with an extensive guarantee, while at the same time, unknown or weakly familiar companies—which dominate among the firms currently offering lifetime guarantees—might pique consumers’ interest with such an unusual service offering.

Thirdly, companies should consider for which products and respective target markets they offer these types of guarantees. In the context of this study with the use of a product that is both utilitarian and to some degree susceptible to trends (i.e., bags, suitcases, etc.), unlimited lifetime guarantees seem to be fit for all types of consumers, regardless of their variety seeking tendency. However, as generalizability cannot be guaranteed for other product categories, this finding should be handled with caution. Yet even if the offer of a lifetime guarantee might not turn variety seeking consumers into loyal customers, a company can nevertheless benefit from them through positive word of mouth. Woratschek and Horbel (2006) suggest that variety seekers’ recommendations can be helpful in attracting new customers, improving brand reputation, and thus achieving long-term profitability.

Overall, the extensive amount of literature on guarantee claims data (e.g., Karim & Suzuki, 2005; Wu, 2012), claims forecasting (e.g., Kalbfleisch et al., 1991; Yang et al., 2016; Shokouhyar et al., 2021), and optimal guarantee policy determination (e.g., Chien, 2005; Hooti et al., 2020; Qiao et al., 2022) suggests that the use of guarantees requires careful consideration, all the more so if they cover an entire lifetime.

#### 5.4 Limitations and Future Research

Discovering the potential and overcoming the challenges associated with lifetime guarantees deserves closer investigation. The focus on the comparison of lifetime guarantees with and without limitations, although valuable, comes with the drawback of excluding other forms of guarantees. Thus, future research should, first and foremost, consider comparing other guarantee offerings. Limited lifetime guarantees should be compared to no guarantee at all or to a “normal” guarantee covering the same time period to determine whether the label “lifetime” leads to better evaluations. On the one hand, overstating quality has been shown to increase quality perceptions (Olshavsky & Miller, 1972), performance expectations, and purchase intentions (Burke et al., 1988), implying that a lifetime guarantee, even with limitations, would lead to better evaluations than a regular guarantee. Kopalle and Lehmann (2015) identified factors which might encourage companies to overstate quality, such as competition or the lack of legal consequences for misleading quality claims, thus establishing conditions under which companies might be inclined to use limited lifetime guarantees. On the other hand, considering the literature on misleading advertising and its detrimental effects on consumer behavior (e.g., Russo et al., 1981; Hastak & Mazis, 2011; Nuseir, 2018), playing with the terminology and speculating on consumers’ interpretations might irritate them or make them feel deceived, suggesting that a limited lifetime guarantee could be worse than no guarantee at all. Criticism of lifetime guarantees often refers to their semantic ambiguity and resulting misperception (e.g., Tims, 2017, 2019; Tatum, 2023); consequently, a brief survey asking consumers what period they associate with *lifetime* could shed light on their actual expectations and thus provide empirical evidence to both business studies and policy makers about whether such a misconception actually exists. Moreover, while consumer attitudes are often used to predict actual behavior, they remain an approximation, not fully reflecting real purchase behavior, especially in the context of sustainable consumption (Babin & Zikmund, 2016; White et al., 2019). In order to better estimate to what extent the effects analyzed could translate into actual buying behavior, willingness to pay could be investigated as a dependent

variable. In combination with the analysis of lifetime guarantee claims data, which provide information about the extent such guarantees are claimed by customers, this would enable managers to assess whether such an offer would in fact be profitable (Karim & Suzuki, 2005; Wu, 2012).

Secondly, the experiment investigated consumer reactions using only one product category, namely luggage. Since the stimulus was carefully designed and referred to several products from this category (i.e., suitcases, bags, and backpacks), which contains both utilitarian and hedonic respectively stylistic aspects, it seems reasonable to assume that the results could be applied at least for comparable categories, such as functional apparel and gear. However, the impact of communication mechanisms on consumer behavior differs based on the type of product, specifically experience vs. search goods (Huang et al., 2009). Thus, future studies would need to examine other product groups to assess whether the results obtained from the data can be generalized respectively they ought to explore for which type of product such guarantees would be most effective (Suwelack et al., 2011). Regardless of the type of product they are offered for, guarantee services deal with customers experiencing defective products and thus a lack of satisfaction. Dissatisfaction, as well as the perceived lack of responsiveness of companies to complaints, was found to be positively related to a “tendency to engage in negative word of mouth” (e.g., Richins, 1983; Brown & Beltramini, 1989; Blodgett et al., 1993; Glynn Mangold et al., 1999, p. 75; Halstead, 2002). Considering that (lifetime) guarantees are an important after-sales service dealing with complaints, further research into their effects on word of mouth could provide valuable insights. Glynn Mangold et al. (1999) emphasize the importance of word of mouth in service marketing, and indeed, word of mouth referrals were found to be even more effective in attracting new customers than other, more traditional forms of marketing (East et al., 2005; Wangenheim & Bayón, 2007; Trusov et al., 2009). Apart from efforts to minimize negative word of mouth by improving services, “marketers may stimulate positive word by putting prospective customers in contact with satisfied customers” (Glynn Mangold et al., 1999, p. 83). As noted by Kumar et al. (2007), the value of a customer lies not only in their amount of purchases, but rather in their ability to attract profitable new customers with their word of mouth referrals, suggesting, as already discussed, that variety seekers could also play a moderating role in this context. Complementarily, market mavens—that is, “individuals who have information about many kinds of products (...), and initiate discussions with consumers and respond to requests from consumers for market information” (Feick & Price, 1987, p. 85)—who are often defined by their strong tendency towards variety seeking (Wiedmann et al., 2001; Stokburger-Sauer &

Hoyer, 2009), were found to “engage in stronger referral behavior that leads to more new customers and revenue for the firm” (Walsh & Elsner, 2012, p. 74). This indicates that variety seeking customers could be particularly helpful in word of mouth communication, as was also suggested by Woratschek and Horbel (2006).

Thirdly, beyond the focus of this work, lifetime guarantees could also be explored in the context of sustainable consumption. Product durability and life spans are an essential dimension of sustainability, and if marketed as such, can help consumers overcome their product durability neglect (Sun et al., 2021). Sun et al. (2021) suggest that emphasizing the “durability aspect of sustainability can be an effective marketing strategy for high-end brands to promote their products” (p. 3). Their study found that by increasing the salience of the oftentimes overlooked attribute of product durability, consumers can be helped to overcome their durability neglect, meaning that by focusing marketing communications on the aspect of durability, consumers are nudged towards valuing durability as an important attribute in comparison to other cues (Sun et al., 2021). Accordingly, emphasizing the explicit cue “guarantee” and thus making product durability salient should increase the importance consumers give to guarantees and add a potential marketing tool to promote sustainability. Against this backdrop, a lifetime guarantee signaling a long lifespan should allow companies not only to promote the high-end quality of their products, but their sustainability as well. Complementing this, a recent study found that “consumers rate brands that communicate about product reparability more favorably, (...) offering empirical evidence that brands can use prepurchase reparability communications to signal that their products are durable and to enhance consumers’ awareness of their CSR activities” (Munten & Vanhamme, 2023, p. 13). Accordingly, a guarantee—which by definition promises repair (as well as replacement) in case of defects—could have a similar effect on the perception of durability and sustainability of a brand’s products. A lifetime guarantee would also allow companies to make a statement and actively go against fast-paced, mass consumption, for example, in the case of fast fashion, and provide them with a counter-argument against accusations of planned obsolescence (Somerville, 2016), which could improve their image in times of trends like anti-consumption and voluntary simplicity. Lastly, as an important aspect of unsustainable consumption respectively overconsumption, disposal behavior for products with (lifetime) guarantees could be explored as well to investigate whether longer guarantees could reduce waste generation (Cooper & Salvia, 2018; Laitala et al., 2020). Similar to the best-before date on food, a guarantee could signal to consumers the “minimum lifespan” of a product. Various studies have shown (e.g., Wilson et al., 2017; Davenport et al., 2019; Kavanaugh & Quinlan, 2020;

Toma et al., 2020), that due to this expiration date enormous amounts of unnecessary waste are generated in the food sector as still edible products are disposed. According to this logic, a lifetime guarantee could reduce the willingness to throw away the product prematurely and instead encourage sustainable disposal behaviors for still-functioning products, such as reuse or reselling. In addition, Laitala et al. (2020) suggest that extending the guarantee period—which for many consumers is a decisive factor for repair—could increase the overall amount of repairs. Thus, by prolonging a guarantee and consequently the product lifecycle, waste could be reduced and the environmental impact of consumption minimized.

## 6 Conclusion

The purpose of this study was to investigate the impact of different forms of lifetime guarantees on brand attitudes and the mediating role of quality perceptions. Unlimited lifetime guarantees were compared to those with limitations to evaluate how consumers' reactions differ depending on the provision of restrictions and conditions. Additionally, it was intended to examine whether the tendency to seek variety would weaken the effects of lifetime guarantees and quality perceptions, and potentially reverse the effect on brand attitudes.

While the hypotheses regarding the beneficial nature of unlimited lifetime guarantees and the mediation of quality perceptions could be confirmed, no significant moderating effect of variety seeking could be found. The findings accentuate the suitability of signaling theory and the use of quality perception to explain the impact of guarantees on brand attitudes. At the same time, they also point out the need for further research regarding the relationship between variety seeking and the consumption of durable and thus sustainable products. Even though this particular personality trait appears to have no moderating influence in this context, the results remain difficult to generalize. Thus, to ensure and improve a guarantee's effectiveness, companies should carefully consider how to employ and adapt their guarantee service in order to attract and retain their targeted consumers (Fabien, 2005; Jin & He, 2013).

Although commercial guarantees are frequently used by companies and the only way—besides the statutory guarantee—for customers to claim promised quality, consumers often face difficulties in this process due to the terms and conditions in the small print, which are typically formulated in legal jargon and thus incomprehensible to ordinary consumers (Menezes & Quelch, 1990; Fabien, 2005). If a company decides to make a guarantee more

attractive by extending it to a lifetime and thus emphasizing it in the promotion, it should formulate such an offer as clearly as possible and not create false expectations in order to avoid unhappy customers, legal issues, and a damaged image (Suwelack et al., 2011; Lazarus, 2014; Tims, 2019; Rose, 2020; Booth, 2023). *In short, to maximize the outcomes of their good intentions, companies should avoid making big promises with lots of buts and ifs.*

Overall, lifetime guarantees constitute a promising approach for companies aiming to communicate the high-end, durable quality of their products, if limitations and restrictions are handled with care. Recent consumer surveys and policy developments (e.g., Hosp, 2020; European Commission, 2020; OTS, 2023; European Parliament, 2023) indicate that quality and durability are coming back into focus, reiterating the potential of this strategy to benefit both companies and consumers.

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## Appendices

### Appendix A. Questionnaire

#### WELCOME MESSAGE

Liebe Teilnehmerin, lieber Teilnehmer,

im Zuge meiner Masterarbeit an der Universität Wien muss ich eine Umfrage durchführen und bitte Sie daher um Ihre Unterstützung. Es sind dazu einige wenige Fragen zu beantworten, die Umfrage wird nicht mehr als 5 Minuten Ihrer Zeit in Anspruch nehmen.

Selbstverständlich werden Ihre Angaben anonymisiert, bevor sie gespeichert und verarbeitet werden. Wenn Sie Fragen oder Bedenken dazu haben, können Sie mich gerne kontaktieren unter: stella.aurelia.berg@univie.ac.at. Durch das Starten der Umfrage, erklären Sie sich mit der Verarbeitung Ihrer anonymisierten Daten einverstanden.

Vielen Dank, dass Sie sich die Zeit nehmen, Ihre Hilfe ist äußerst wertvoll und wird sehr geschätzt!

Besten Dank und schöne Grüße,

Stella Berg

#### INTRODUCTION

Zu Beginn wird Ihnen eine Werbeanzeige präsentiert, anschließend werden Ihnen einige allgemeine Fragen sowie Fragen in Bezug auf das gezeigte Produkt und die Marke gestellt.

Es wird nicht möglich sein, während der Umfrage zwischen der Anzeige und den Fragen vor und zurück zu wechseln. Daher bitte ich Sie, sich ausreichend Zeit zu nehmen, und sowohl den Inhalt der Anzeige, als auch die folgenden Fragen sorgfältig und in Ruhe durchzulesen. Wenn Sie die Umfrage auf einem Mobiltelefon machen, empfiehlt sich bei der Anzeige und der ersten Frage das Querformat.

Bei der Beantwortung der Fragen können sie nichts falsch machen, wichtig ist Ihre persönliche Meinung.

## LIMITED LIFETIME GUARANTEE CONDITION (IV)

Bitte sehen Sie sich die Werbeanzeige genau an und lesen Sie den Text aufmerksam durch.



PAK

LEBENSLANGE GARANTIE\*

Wir sind überzeugt von der hohen Qualität und langen Lebensdauer unserer Produkte. Daher bieten wir Ihnen eine lebenslange Garantie auf unsere Taschen, Rucksäcke und Koffer.

\* Die Garantie bezieht sich auf den üblichen Lebenszyklus unserer Produkte. Die genauen Bedingungen finden Sie in unseren FAQs.

## UNLIMITED LIFETIME GUARANTEE CONDITION (IV)

Bitte sehen Sie sich die Werbeanzeige genau an und lesen Sie den Text aufmerksam durch.



PAK

LEBENSLANGE GARANTIE

Wir sind überzeugt von der hohen Qualität und langen Lebensdauer unserer Produkte. Daher bieten wir Ihnen eine lebenslange Garantie auf unsere Taschen, Rucksäcke und Koffer.

Für immer – ohne wenn und aber!

## BRAND ATTITUDES (DV)

Sie haben eben eine Werbung der Marke PAK gesehen, welchen Eindruck haben Sie gewonnen? Diese Marke ist...

	1	2	3	4	5	6	7	
Nicht ansprechend	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Ansprechend
Schlecht	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Gut
Unangenehm	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Angenehm
Nachteilig	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Vorteilhaft
Unsympathisch	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Sympathisch

## QUALITY PERCEPTIONS (MED)

Welchen Eindruck haben Sie von der Produktqualität der Marke PAK gewonnen?

	Stimme überhaupt nicht zu	Stimme nicht zu	Stimme teilweise nicht zu	Weder noch	Stimme teilweise zu	Stimme zu	Stimme voll zu
Produkte dieser Marke sind von guter Qualität.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Die Materialien, welche diese Marke in ihren Produkten verwenden, sind von guter Qualität.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Die Verarbeitungsqualität ist gut.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Die Produkte dieser Marke sind fehlerfrei.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Die Produkte dieser Marke sind langlebig.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Die Produkte dieser Marke sind verlässlich.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## VARIETY SEEKING (MOD)

Inwieweit stimmen Sie den folgenden Aussagen zu?

	Stimme überhaupt nicht zu	Stimme nicht zu	Stimme teilweise nicht zu	Weder noch	Stimme teilweise zu	Stimme zu	Stimme voll zu
Ich erlebe gerne Neues und Abwechslung in meiner täglichen Routine.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ich ziehe eine routinemäßige Lebensweise einem Leben voller Veränderung vor.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ich mag es meine Aktivitäten immer wieder zu ändern.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ich mag es immer wieder die gleichen und gewohnten Dinge zu tun, anstatt neue und verschiedene Dinge auszuprobieren.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ich bin ständig auf der Suche nach neuen Ideen und Erfahrungen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



## MANIPULATION CHECK

Bitte erinnern Sie sich noch einmal an den Text in der Werbeanzeige vom Beginn der Umfrage. Inwieweit stimmt die folgende Aussage mit diesem überein?

	Stimmt überhaupt nicht überein	Stimmt nicht überein	Stimmt eher nicht überein	Weder noch	Stimmt eher überein	Stimmt überein	Stimmt voll überein
Die Marke PAK wirbt mit einer lebenslangen Garantie ohne irgendwelchen Einschränkungen.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## DEMOGRAPHICS

Abschließend bitte ich Sie noch einige Fragen zu Ihrer Person zu beantworten. Bitte versuchen Sie wahrheitsgemäß zu antworten. Falls Sie das nicht wollen, haben Sie auch die Option, keine Angabe zu machen. Zur Erinnerung - Ihre Daten werden anonymisiert verarbeitet.

Wie alt sind Sie? \_\_\_\_\_

Wie identifizieren Sie sich?

- ☐ Männlich
- ☐ Weiblich
- ☐ Anderes
- ☐ Keine Angabe

## DEBRIEFING

Vielen Dank für Ihre Teilnahme an der Umfrage!  
Ihre Daten wurden nun anonymisiert gespeichert.

Diese Studie untersucht wie sich die Beurteilung von lebenslangen Garantien („lifetime guarantees“) verändert, wenn diese Einschränkungen beinhalten, ob eine Veränderung über die Wahrnehmung der Produktqualität erklärt werden kann und wie sich das Persönlichkeitsmerkmal „Variety Seeking“, also das Bedürfnis nach Abwechslung, auf diese Beurteilung auswirkt.

Herzlichen Dank, dass Sie sich die Zeit genommen haben, mich bei meiner Arbeit zu unterstützen!

## Appendix B. Measurement Scales

Dimension / Scale	Items
<b>Brand attitude</b> Seven-point semantic differential scale (Spears & Singh, 2004) Cronbach's $\alpha = .92$	Unappealing/Appealing Bad/Good Unpleasant/Pleasant Unfavorable/Favorable Unlikable/Likeable
<b>Perceived Quality</b> Seven-point likert scale, 1 = <i>strongly disagree</i> to 7 = <i>strongly agree</i> (Erdogmus & Büdeyri-Turan, 2012) Cronbach's $\alpha = .93$	Products having this brand's name are of good quality. The fabric used in this brand's products is of good quality. Its construction quality is good. Its products are flawless. Its products are durable. Its products are reliable.
<b>Variety Seeking</b> Seven-point likert scale 1 = <i>strongly disagree</i> to 7 = <i>strongly agree</i> (Steenkamp & Baumgartner, 1995) Cronbach's $\alpha = .80$	I am continually seeking new ideas and experiences. I like to continue doing the same old things rather than trying new and different things. I like continually changing activities. I prefer a routine way of life to an unpredictable one full of change. I like to experience novelty and change in my daily routine.

*Note.* Both scales measuring the mediator (perceived quality) and the moderator (variety seeking) were placed after the measurement of the dependent variable (brand attitudes) to avoid affecting the latter (Stoner et al., 2022). In order to avoid order bias (Babin & Zikmund, 2016), the scale items were randomized and some items were reverse coded.

### Output Reliability Test – Cronbach's Alpha

#### Zusammenfassung der Fallverarbeitung

		N	%
Fälle	Gültig	177	100,0
	Ausgeschlossen <sup>a</sup>	0	,0
	Gesamt	177	100,0

a. Listenweise Löschung auf der Grundlage aller Variablen in der Prozedur.

## Brand Attitudes

### Reliabilitätsstatistiken

Cronbachs Alpha	Anzahl der Items
,921	5

### Item-Skala-Statistiken

	Skalenmittelwert, wenn Item weggelassen	Skalenvarianz, wenn Item weggelassen	Korrigierte Item- Skala-Korrelation	Cronbachs Alpha, wenn Item weggelassen
BA_1	19,98	28,505	,774	,908
BA_2	19,57	29,837	,793	,903
BA_3	19,64	30,003	,835	,895
BA_4	19,55	29,885	,802	,901
BA_5	19,97	30,419	,778	,906

## Quality Perception

### Reliabilitätsstatistiken

Cronbachs Alpha	Anzahl der Items
,929	6

### Item-Skala-Statistiken

	Skalenmittelwert, wenn Item weggelassen	Skalenvarianz, wenn Item weggelassen	Korrigierte Item- Skala-Korrelation	Cronbachs Alpha, wenn Item weggelassen
QP_1	25,18	35,020	,900	,904
QP_2	25,38	36,339	,761	,921
QP_3	25,36	34,334	,867	,907
QP_4	26,21	37,166	,607	,941
QP_5	25,15	34,149	,814	,914
QP_6	25,27	34,369	,842	,910

## Variety Seeking

### Reliabilitätsstatistiken

Cronbachs Alpha	Anzahl der Items
,802	5

### Item-Skala-Statistiken

	Skalenmittelwert, wenn Item weggelassen	Skalenvarianz, wenn Item weggelassen	Korrigierte Item- Skala-Korrelation	Cronbachs Alpha, wenn Item weggelassen
VS_1	18,20	19,515	,555	,774
VS_2	19,66	16,805	,627	,752
VS_3	18,59	19,288	,579	,767
VS_4	19,04	16,868	,627	,751
VS_5	18,22	19,332	,553	,774

## Appendix C. Output Assumptions Tests

The assumption of *independence* was tested using the Durbin-Watson statistic, with a value of 1.89 suggesting that the assumption of independence of residuals is met (Clement & Bradley-Garcia, 2022). To test for *multicollinearity*, the variance inflation factor (VIF) and tolerance statistic were generated and all predictors were above 0.1 tolerance (.94; 1.00; .94) and VIF was below 10 (1.06; 1.00; 1.06) (Clement & Bradley-Garcia, 2022; Field, 2018). *Linearity* was tested visually by using a scatter diagram (Figure C1) to plot the unstandardized predicted values against the studentized residuals and thus represent the linear relationship among all variables (Clement & Bradley-Garcia, 2022). The largely horizontal configuration of the data suggests that the assumption of linearity was met (Clement & Bradley-Garcia, 2022). The same plot was used to check *homoscedasticity*, and since the plot showed no pattern, this assumption was assumed to be met as well (Clement & Bradley-Garcia, 2022). The assumption of *normal distribution* of the residuals was checked by inspecting a histogram (Figure C2) and a P-P plot of standardized residuals (Figure C3), both graphs showing no severe violations and thus indicating normally distributed data (Clement & Bradley-Garcia, 2022).

### Modellzusammenfassung<sup>b</sup>

Modell	R	R-Quadrat	Korrigiertes R-Quadrat	Standardfehler des Schätzers	Durbin-Watson-Statistik
1	,700 <sup>a</sup>	,489	,480	,97291	1,892

a. Einflußvariablen : (Konstante), IV\_Cond, MOD\_VS, MED\_QP

b. Abhängige Variable: DV\_BA

### Koeffizienten<sup>a</sup>

Modell		Kollinearitätsstatistik	
		Toleranz	VIF
1	(Konstante)		
	MED_QP	,940	1,063
	MOD_VS	1,000	1,000
	IV_Cond	,940	1,063

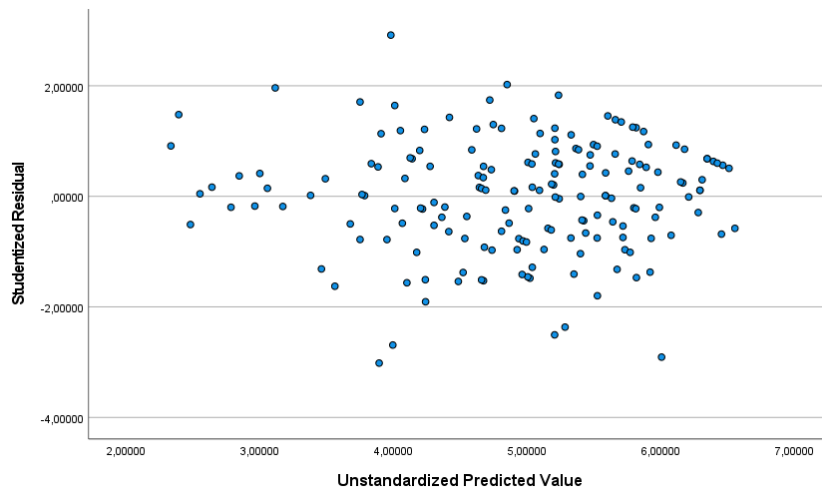


Figure C1. Scatter Plot

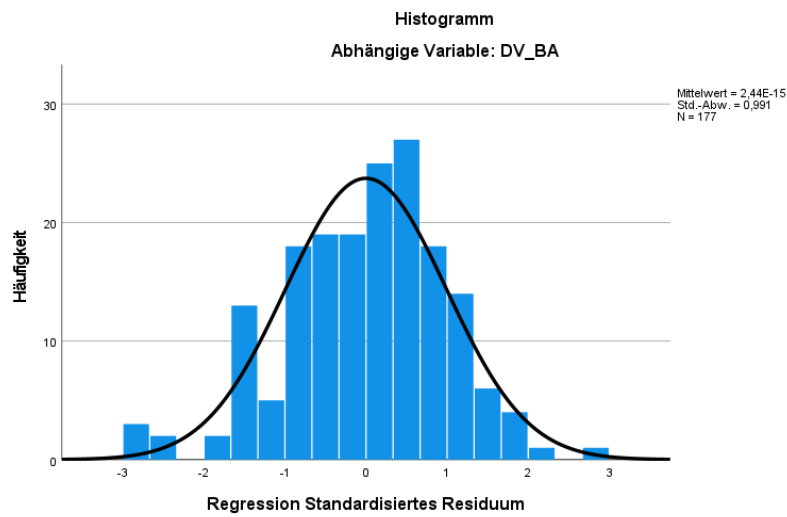


Figure C2. Histogram

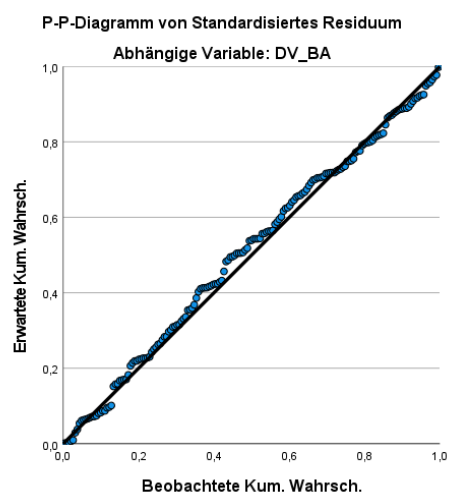


Figure C3. P-P-Diagram

## Appendix D. Output Manipulation Check: Independent Samples t Test

### Gruppenstatistiken

	IV_Cond	N	Mittelwert	Std.-Abweichung	Standardfehler des Mittelwertes
MC_1	1	85	2,93	1,993	,216
	2	92	5,97	1,378	,144

### Test bei unabhängigen Stichproben

Levene-Test der Varianzgleichheit				t-Test für die Mittelwertgleichheit	
F				T	df
MC_1	Varianzen sind gleich	27,304	<,001	-11,870	175
	Varianzen sind nicht gleich			-11,704	147,986

t-Test für die Mittelwertgleichheit Signifikanz					
		Einseitiges p	Zweiseitiges p	Mittlere Differenz	Differenz für Standardfehler
MC_1	Varianzen sind gleich	<,001	<,001	-3,038	,256
	Varianzen sind nicht gleich	<,001	<,001	-3,038	,260

t-Test für die Mittelwertgleichheit 95% Konfidenzintervall der Differenz			
		Unterer Wert	Oberer Wert
MC_1	Varianzen sind gleich	-3,543	-2,533
	Varianzen sind nicht gleich	-3,551	-2,525

### Effektgrößen bei unabhängigen Stichproben

		Standardisierter <sup>a</sup>	Punktschätzung	95% Konfidenzintervall	
				Unterer Wert	Oberer Wert
MC_1	Cohen's d	1,701	-1,786	-2,133	-1,435
	Hedges' Korrektur	1,709	-1,778	-2,124	-1,429
	Glass' Delta	1,378	-2,204	-2,636	-1,766

a. Der bei der Schätzung der Effektgrößen verwendete Nenner.

Cohen's d verwendet die zusammengefasste Standardabweichung.

Hedges' Korrektur verwendet die zusammengefasste Standardabweichung und einen Korrekturfaktor.

Glass' Delta verwendet die Standardabweichung einer Stichprobe von der Kontrollgruppe.

## Appendix E. Output Process Model 4: Simple Mediation Analysis

\*\*\*\*\* PROCESS Procedure for SPSS Version 4.2 \*\*\*\*\*

Written by Andrew F. Hayes, Ph.D. [www.afhayes.com](http://www.afhayes.com)  
Documentation available in Hayes (2022). [www.guilford.com/p/hayes3](http://www.guilford.com/p/hayes3)

\*\*\*\*\*

Model : 4  
Y : DV\_BA  
X : IV\_Cond  
M : MED\_QP

Sample  
Size: 177

\*\*\*\*\*

OUTCOME VARIABLE:

MED\_QP

Model Summary

R	R-sq	MSE	F (HC3)	df1	df2	p
,244	,060	1,314	10,778	1,000	175,000	,001

Model

	coeff	se (HC3)	t	p	LLCI	ULCI
constant	4,212	,296	14,217	,000	3,627	4,797
IV_Cond	,574	,175	3,283	,001	,229	,919

\*\*\*\*\*

OUTCOME VARIABLE:

DV\_BA

Model Summary

R	R-sq	MSE	F (HC3)	df1	df2	p
,697	,486	,947	106,101	2,000	174,000	,000

Model

	coeff	se (HC3)	t	p	LLCI	ULCI
constant	,729	,366	1,995	,048	,008	1,451
IV_Cond	,162	,147	1,102	,272	-,128	,453
MED_QP	,779	,054	14,433	,000	,672	,885

\*\*\*\*\* TOTAL EFFECT MODEL \*\*\*\*\*

OUTCOME VARIABLE:

DV\_BA

Model Summary

R	R-sq	MSE	F (HC3)	df1	df2	p
,226	,051	1,739	9,189	1,000	175,000	,003

Model

	coeff	se (HC3)	t	p	LLCI	ULCI
constant	4,009	,339	11,821	,000	3,340	4,679
IV_Cond	,609	,201	3,031	,003	,213	1,006

\*\*\*\*\* TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y \*\*\*\*\*

Total effect of X on Y

Effect	se (HC3)	t	p	LLCI	ULCI
,609	,201	3,031	,003	,213	1,006

Direct effect of X on Y

Effect	se (HC3)	t	p	LLCI	ULCI
,162	,147	1,102	,272	-,128	,453

Indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
MED_QP	,447	,136	,179	,718

\*\*\*\*\* BOOTSTRAP RESULTS FOR REGRESSION MODEL PARAMETERS \*\*\*\*\*

OUTCOME VARIABLE:

MED\_QP

	Coeff	BootMean	BootSE	BootLLCI	BootULCI
constant	4,212	4,214	,297	3,612	4,798
IV_Cond	,574	,573	,176	,230	,929

-----

OUTCOME VARIABLE:

DV\_BA

	Coeff	BootMean	BootSE	BootLLCI	BootULCI
constant	,729	,719	,361	-,006	1,412
IV_Cond	,162	,165	,143	-,112	,450
MED_QP	,779	,780	,054	,673	,887

\*\*\*\*\* ANALYSIS NOTES AND ERRORS \*\*\*\*\*

Level of confidence for all confidence intervals in output:

95,0000

Number of bootstrap samples for percentile bootstrap confidence intervals:

5000

NOTE: A heteroscedasticity consistent standard error and covariance matrix estimator was used.

----- END MATRIX -----



## Appendix F. Output Process Model 59: Moderated Mediation

\*\*\*\*\* PROCESS Procedure for SPSS Version 4.2 \*\*\*\*\*

Written by Andrew F. Hayes, Ph.D. [www.afhayes.com](http://www.afhayes.com)  
Documentation available in Hayes (2022). [www.guilford.com/p/hayes3](http://www.guilford.com/p/hayes3)

\*\*\*\*\*

Model : 59  
Y : DV\_BA  
X : IV\_Cond  
M : MED\_QP  
W : MOD\_VS

Sample  
Size: 177

\*\*\*\*\*

OUTCOME VARIABLE:  
MED\_QP

Model Summary	R	R-sq	MSE	F (HC3)	df1	df2	p
	,275	,076	1,307	5,240	3,000	173,000	,002

Model	coeff	se (HC3)	t	p	LLCI	ULCI
constant	-,874	,298	-2,939	,004	-1,461	-,287
IV_Cond	,574	,175	3,274	,001	,228	,921
MOD_VS	-,428	,293	-1,462	,146	-1,006	,150
Int_1	,287	,168	1,702	,091	-,046	,619

Product terms key:  
Int\_1 : IV\_Cond x MOD\_VS

Test(s) of highest order unconditional interaction(s):

	R2-chng	F (HC3)	df1	df2	p
X*W	,016	2,896	1,000	173,000	,091

-----

Focal predict: IV\_Cond (X)  
Mod var: MOD\_VS (W)

Conditional effects of the focal predictor at values of the moderator(s):

MOD_VS	Effect	se (HC3)	t	p	LLCI	ULCI
-1,046	,275	,263	1,043	,298	-,245	,794
,000	,574	,175	3,274	,001	,228	,921
1,046	,874	,233	3,753	,000	,414	1,333

\*\*\*\*\*

OUTCOME VARIABLE:  
DV\_BA

Model Summary	R	R-sq	MSE	F (HC3)	df1	df2	p
	,701	,491	,955	46,664	5,000	171,000	,000

Model	coeff	se (HC3)	t	p	LLCI	ULCI
constant	4,676	,256	18,245	,000	4,170	5,182
IV_Cond	,171	,153	1,117	,266	-,131	,472
MED_QP	,772	,058	13,329	,000	,658	,886
MOD_VS	-,226	,240	-,943	,347	-,699	,247
Int_1	,103	,153	,678	,499	-,198	,405
Int_2	-,009	,053	-,177	,860	-,113	,094

Product terms key:  
Int\_1 : IV\_Cond x MOD\_VS  
Int\_2 : MED\_QP x MOD\_VS

Test(s) of highest order unconditional interaction(s):

	R2-chng	F(HC3)	df1	df2	p
X*W	,001	,459	1,000	171,000	,499
M*W	,000	,031	1,000	171,000	,860

\*\*\*\*\* DIRECT AND INDIRECT EFFECTS OF X ON Y \*\*\*\*\*

Conditional direct effects of X on Y

MOD_VS	Effect	se(HC3)	t	p	LLCI	ULCI
-1,046	,062	,194	,321	,749	-,321	,446
,000	,171	,153	1,117	,266	-,131	,472
1,046	,279	,245	1,139	,256	-,204	,762

Conditional indirect effects of X on Y:

INDIRECT EFFECT:

IV_Cond	->	MED_QP	->	DV_BA
MOD_VS	Effect	BootSE	BootLLCI	BootULCI
-1,046	,215	,198	-,175	,602
,000	,443	,131	,190	,705
1,046	,666	,180	,331	1,035

Pairwise contrasts between conditional indirect effects (Effect1 minus Effect2)

Effect1	Effect2	Contrast	BootSE	BootLLCI	BootULCI
,443	,215	,229	,134	-,028	,496
,666	,215	,451	,269	-,061	,987
,666	,443	,223	,138	-,033	,507

\*\*\*\*\* BOOTSTRAP RESULTS FOR REGRESSION MODEL PARAMETERS \*\*\*\*\*

OUTCOME VARIABLE:

MED\_QP

	Coeff	BootMean	BootSE	BootLLCI	BootULCI
constant	-,874	-,874	,290	-1,450	-,319
IV_Cond	,574	,573	,172	,244	,913
MOD_VS	-,428	-,444	,281	-,979	,124
Int_1	,287	,295	,163	-,030	,611

-----

OUTCOME VARIABLE:

DV\_BA

	Coeff	BootMean	BootSE	BootLLCI	BootULCI
constant	4,676	4,670	,254	4,159	5,162
IV_Cond	,171	,172	,151	-,126	,477
MED_QP	,772	,771	,058	,655	,884
MOD_VS	-,226	-,229	,237	-,715	,229
Int_1	,103	,105	,151	-,183	,402
Int_2	-,009	-,008	,057	-,118	,108

\*\*\*\*\* ANALYSIS NOTES AND ERRORS \*\*\*\*\*

Level of confidence for all confidence intervals in output: 95,0000

Number of bootstrap samples for percentile bootstrap confidence intervals: 5000

W values in conditional tables are the mean and +/- SD from the mean.

NOTE: A heteroscedasticity consistent standard error and covariance matrix estimator was used.

NOTE: The following variables were mean centered prior to analysis: MOD\_VS MED\_QP

----- END MATRIX -----

## Appendix G. Translated Abstract

Lebenslange Garantien bieten Unternehmen die Möglichkeit außergewöhnliche Langlebigkeit, Qualität und „Reparierbarkeit“ zu signalisieren und haben sowohl Konsumenten als auch Firmen zahlreiche Vorteile. Jedoch variieren lebenslange Garantien oft in ihrem Umfang und in ihrer Länge, beinhalten einschränkende Konditionen, und sind oft vage formuliert, was Konsumenten möglicherweise verwirren und in die Irre führen kann. Der Zweck dieser Studie ist es daher, den Einfluss von lebenslangen Garantien mit versus ohne Einschränkungen auf Markeneinstellungen zu vergleichen, mit der Annahme, dass das Weglassen von Einschränkungen zu besseren Bewertungen führt. Da Garantien in der Regel als Qualitätszeichen verwendet werden, wurde die Signaltheorie zur Erklärung dieses Effekts herangezogen, indem Qualitätswahrnehmungen als potenzieller Mediator untersucht wurden. Darüber hinaus sollte untersucht werden, ob der vermutete positive Effekt für alle Konsumenten gleichermaßen gilt, oder ob Persönlichkeitsmerkmale, insbesondere eine Neigung zu „variety seeking“, den Effekt abschwächen würden. Ein Online-Experiment mit 177 Teilnehmern ergab, dass eine unbegrenzte lebenslange Garantie die Markeneinstellungen der Konsumenten verbessert, indem sie höhere Qualitätswahrnehmungen hervorruft als eine begrenzte lebenslange Garantie. Eine Moderation von „variety seeking“ konnte mit den Ergebnissen nicht bestätigt werden, was auf verschiedene Ursachen zurückgeführt werden kann und daher den Bedarf an weiterführender Forschung in diesem Bereich aufzeigt. Zusammenfassend hat die Studie zur bestehenden Literatur beigetragen, indem sie erste empirische Belege für die positive Wirkung von unlimitierten lebenslangen Garantien geliefert hat, was Unternehmen darin unterstützt, effektive Garantieangebote zu entwickeln um erfolgreich ihre Überzeugung von der Qualität und Langlebigkeit ihrer Produkte zu kommunizieren.