

Dunković, Dario; Knežević, Blaženka

Article

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EXTENDED WARRANTY AND ITS IMPACT ON PERCEPTION IN SALES PROMOTION OF DURABLES

Dario DUNKOVIĆ , Blaženka KNEŽEVIĆ 

Faculty of Economics and Business, University of Zagreb, Zagreb, Croatia

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Abstract. *Purpose* – The aim of the paper is to determine the perception of extended warranty when communicated by retailer during the sales promotion of durable products (e.g. refrigerators). We consider perception as five signals or conceptual dimensions in retail context. The research question is: What perception creates the extended warranty? The dimensions studied can increase or decrease the value and therefore attractiveness of the product. In this sense, extended warranties are a tool that retailers can use to change customers' attitudes towards a product. There is little primary research that shows how communication of extended warranties influences customer perception and which signals are relevant to customers and retailers.

Research methodology – A survey was conducted on a sample of 180 respondents. The measurement model includes extended warranty as a construct with five observed variables related to customer sentiment (risk relief, no cost, quality, price and brand). Each sentiment signal is tested as a separate hypothesis. The model was tested with SEM and CFA was used to interpret the data.

Findings – In advertising theory, the extended warranty is seen as a signal of better quality and reliability, but we have shown that it creates a sense of risk relief in the purchase decision.

Research limitations – Extended warranties can give rise to perceptions other than those examined in the measurement model. For different categories of consumer goods, the warranty features can be perceived differently.

Practical implications – Retailers design promotional activities by communicating extended warranty to customers. As a result, they do not perceive promoted object as a more expensive due to warranty provision, even though it offers value to customers.

Originality/Value – The originality of the article lies in the different perceptions that arise when customers are confronted with an extended warranty as part of the product promotion in a store. The empirical model proposes a construct of perception of the extended warranty mediated by a unique combination of signals such as risk relief, no cost sentiment, quality, price, and brand value. Only two signals, namely risk relief and quality, influence purchase intention.

Keywords: extended warranty, durables, perception, promotion, SEM.

JEL Classification: D47, L81, M37.

 Corresponding author. E-mail: ddunkovic@efzg.hr

Introduction

Price competition among retailers is fierce, so customers look for additional features when making purchasing decisions (Maronick, 2007). Retailers highlight different product attributes to attract customers. Therefore, promoting extended warranties on durable goods (e.g. 2 + 3 years) has become a common marketing strategy for retailers as a cue that triggers a customer towards considering a purchase of the product. The effects of warranties have been studied more seriously since the 1960s, when retailers began to introduce them to gain a competitive advantage in the marketplace (Erdem & Swait, 1998). Since then, warranties

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have gained importance in marketing theory. However, there are few papers explaining how customers perceive a product offer where an extended warranty represents one of the attributes. In particular, there is little primary research in this area. The emphasis on the extended warranty period for durable goods as an integral part of the sales promotion is widespread. Mystery shopping in the European Commission [EC] study (EC, 2015) found that an extended warranty is a dimension of marketing strategy in 80% of stores and in 94% of web shops.

In the European Union, statutory consumer guarantees for brown goods (e.g. televisions, mobile phones), white goods (e.g. refrigerators, hoovers) and grey goods (computers and computer peripherals) are an essential part of consumer protection policy. Minimum guarantees are mandatory and regulated in terms of scope, duration and obligations (EC, 2017). The most recent correlation study initiated by the European Commission (2015) identifies three types of product warranties occurring in the European retail market: 1) statutory warranty, 2) extended warranty and 3) commercial warranty. The statutory warranty should provide consumers with reliability, quality and free repair within at least two years of purchase. The study found that 89% of consumers know that the legal warranty covers “breakdowns or operational failures due to faulty materials or workmanship” and 67% check the coverage period before purchase.

The legal guarantee period is not a relevant aspect of the promotional strategy of European retailers because it cannot solely be a feature of differentiation (i.e., it is not allowed to promote it). The function of the extended warranty starts after the statutory warranty period has expired. When a product is promoted with a “5-year warranty”, it is two mandatory years extended to three years by other parties (e.g. an insurance policy organised by the retailer). Around 28% of goods sold in the EU come with an extended warranty (EC, 2017). Generally, marketing communication of warranties create a mental image of a low-cost proposition among customers, as repair is expensive if it occurs (Jain et al., 2007; Mitra, 2021). In addition, some perceive a warranty as a sign of better quality (Noll, 2004; Maronick, 2007) or reliability (Kelley, 1988), which may strengthen brand equity (Chark & Muthukrishnan, 2022) or justify a premium on the product price (Estelami et al., 2016). The motivation for the study is the assumption that different perceptions (i.e. cues) may be considered as a different value proposition.

The warranty concept is a multidimensional marketing construct that is likely to be attractive if it signals lower risk of product functionality or higher quality. It is also likely to create an unpleasant perception of increased price or overestimated brand value. Theory explains the warranty mainly as a signal of better quality and reliability (Chark & Muthukrishnan, 2022). However, it is worth broadening the perspective of this extrinsic cue. Suppose a promoted warranty is perceived by customers as cost relief because they assume that they will not have to bear the costs of repairs within the coverage period. In this case, retailers can increase the price and get a premium for the value they offer. Many studies have shown that customers experience the warranty signal differently (Albaum & Wiley, 2010). This is the motivation for the present empirical study. We have developed a conceptual model consisting of five predictors, each representing a specific perception of the extended warranty when it is part of the marketing communication. Confirmatory factor analysis, one of the methods within structural equation modelling (SEM), will be used to test the model.

1. Theoretical background

Extended warranties have become an increasingly important dimension of a competitive marketing strategy (Albaum & Wiley, 2010) as customers become well informed and compare prices (Dutta et al., 2022). A warranty is a statement of responsibility that promises specific performance and satisfaction to the customer. Overall satisfaction affects sales, market share, cost levels and profitability for many companies (Estelami et al., 2016). An advertised warranty can attract customers because it promises that the product will be fully functional and, if it cannot fulfil its purpose, it will be replaced or repaired free of charge (Noll, 2004). The accompanying warranty promises a repair, replacement or refund if the physical product performance fails.

Product warranty has two main objectives for the retailer, namely promotional and protective objectives (Kiran & Mahesh, 2019). The purpose of the promotional objectives is to encourage the customer's purchase decision, as warranties usually promise better performance and satisfaction during a significant part of the product's life. At the same time, a warranty contract protects the trader from unreasonable customer claims that may arise during the warranty period. Contributing to advertising theory, Kurt et al. (2021) argue that commercial warranties can be viewed as an advertising cost to draw attention to the product and better fit into the competitive landscape.

Consumers are more interested in receiving a longer-term warranty for more valuable products. Therefore, the promotional effect of warranties is the most effective marketing strategy when the price of the product is high, the product is rarely purchased, customers perceive the product as complex and technically demanding, the customer has little familiarity with the product, or the product brand has a low market share (Kurt et al., 2021). The more responsibility and commitment the manufacturer has assumed, the higher the customer's appreciation of the product's value (Chark & Muthukrishnan, 2022). Several theoretical perspectives have been developed to explain the concept of consumer assurance. Signalling theory provides the background for consumer warranties (Boulding & Kirmani, 1993). This theory examines the benefits of seeking information (e.g. about prices) for consumer behaviour. There are many suppliers with different offers, and customers will seek information about offers as long as they feel uncertain and their search costs are in question. The guarantee signals the reliability of the product, and the reliability of the signal depends on the reputation of the retailer (Albaum & Wiley, 2010). Customers are not able to thoroughly check the product at all times to discover "hidden effects" and fully familiarise themselves with its quality (Arikan et al., 2016). Therefore, before purchasing, they rely on the guarantee to signal to them how to replace the "unknown" level of quality (Agrawal et al., 1996). If an advertised guarantee signals a higher value, it may also create the impression of a higher price simply because of the guarantee, which may lead customers to skip the offer.

Several empirical studies have been conducted in the literature on how the offer, including an extended warranty, influences the purchase decision (Albaum & Wiley, 2010; Estelami et al., 2016). Previous research and contributions on the marketing role of the warranty in the product offer can be extended to include a new background of the perception customers have (i.e. as a higher price factor, as a factor of better quality, as a factor of no cost) when

considering the offer and making a purchase decision. For example, customers know that an extended warranty is an assurance that someone will repair the product and cover the repair costs if the product fails within a longer period of time. It is therefore assumed that offering an extended warranty gives customers the impression that these likely costs are already included in the price and that the price is too high for the value the product offers. This impression can have a negative impact on the evaluation of the product in a comparison.

Customer satisfaction is greater when another party assures to cover the costs in case of failure. The retailer uses signals in sales promotion to portray the product as valuable (Onișor & Ioniță, 2021) and better serve the economic interests of customers. Among the signals, the retailer also uses information about the warranty. When promoting the product, information about the extended warranty encourages additional thoughts about the brand (Chark & Muthukrishnan, 2022).

Risk theory encompasses a group of studies in which the warranty reduces the perceived risk for the customer. For complex and valuable products, the customer still determines the extent to which the product meets his or her expectations. The price level helps the buyer to evaluate the product when the features are only partially known. Similarly, the warranty helps to reduce the risk of low performance (Vera & Espinosa, 2019). Reducing risk promotes emotional stability and a comfortable feeling of carefreeness when considering a deal (Goldsmith, 2016).

2. Research model and hypotheses development

Manufacturers and retailers have more information than customers about the products. Therefore, they communicate different marketing signals to inform, delight, and attract customers while promoting devices to persuade them about their competitive quality and reliability (Erdem & Swait, 1998). So far, the theoretical framework of product warranties mainly explains how quality and reliability cues in a store affect decision-making and how a particular dimension of the warranty triggers purchasing decision (Xia et al., 2010). However, there is a lack of research on the perception that arises when the retailer communicates the duration of the extended warranty as a part of the promo information. Some questions arise: Does the warranty give the customer the impression of a special investment? Is it perceived as a coverage for possible repair costs over a longer period? Does it present risk relief during the operation? Does it signal reliability or represent added value for the brand? Although previous contributions have shown that warranties create different signals (e.g. quality, reliability), the measurement model includes precursory and subsequent signals that will be tested. The precursory signals may change direction during a warranty promo. For example, the product may appear more expensive because it includes a warranty as an added value. On the other hand, subsequent signals may be triggered by the warranty promo. Looking at the theoretical background, disclosure of warranty information may produce various signals to customer. Seemingly, signal can even trigger an unpleasant feeling (e.g. higher price). We want to check how customers perceive an extended warranty promo information by testing five different signals. The signals change or emerge under the influence of promotional information, so that each of them will be the subject of a separate hypothesis (Figure 1).

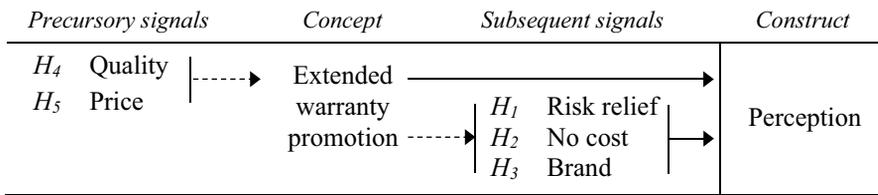


Figure 1. Research model (source: authors)

When purchasing products that are to be used in the long term (e.g. refrigerator, TV), the decision is made with more involvement about consideration of certain risks with all the imponderables and consequences that may arise for the consumer. Risk is an essential component of purchase decision and product warranty acts as a variable to reduce this risk (Shimp & Bearden, 1982; Lwin & Williams, 2006). Purchase of durables is a form of personal investment as it affects quality of life (Işçi & Kitapçı, 2020). Like any other long-term decision, purchasing a valuable product carries a high risk that something negative could happen. For example, when faced with the risk of repair, a customer may reduce it by decreasing the likelihood of paying for the device if it breaks (Kiran & Mahesh, 2019). In these circumstances, the retailer may want to mitigate the perception of risk during the purchase decision (Vera & Espinosa, 2019). An appropriate strategy could be an extended warranty, which helps to reduce the risk of problems and costs if there is a failure or dissatisfaction (Işçi & Kitapçı, 2020). According to a previous study (EC, 2015), 31% of respondents said that a warranty gives them peace of mind because they are concerned about the risks when purchasing household appliances. We will test whether the extended warranty initiate subsequent signal of risk relief, as shown in the infographic in Figure 2. We have set the first hypothesis:

H_1 . The extended warranty is perceived as risk relief.

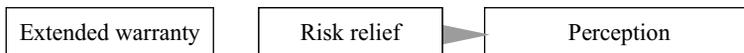


Figure 2. The risk relief signal (source: authors)

Cost is always an obstacle when choosing a product and deciding to purchase. In order to select a product, the perception of the benefits must outweigh the perception of the costs (Albaum & Wiley, 2010). For the duration of the warranty, the manufacturer or the retailer will cover the costs, depending on the type of warranty. It is assumed that the total cost of product consumption is lower if the retailer takes over the costs in the first years. The benefits, especially the savings, may be outweighed in the mental perception by the reference to a warranty. They would not outweigh if no warranty was offered. According to the study (EC, 2015), 26% of respondents said that repair costs would be too high without extended warranty coverage. The warranty represents a tangible benefit in the purchase (Maronick, 2007), which creates a perception of satisfaction after the purchase (Jain et al., 2017). When a customer is faced with the task of selecting a product from alternatives, the perception of the future transaction appears as a cost in their mental accounting, and to maximise utility, the customer tries to find the option to avoid the future costs associated with consuming the

product (Kurt et al., 2021). In addition to the predicted benefits, the customer anticipates the future costs before purchase based on previous experience of the costs during product use. After purchase, the customer is enthusiastic about the product's performance, overestimating the benefits and underestimating the costs. However, after a certain period of time, this enthusiasm wears off and the costs are likely to be higher than originally expected. Those who have recently faced unexpectedly high product repair costs are likely to view the warranty in terms of these costs and choose ways to avoid them (e.g. by giving preference to alternatives with longer warranty periods). We will test whether the extended warranty triggers a subsequent signal of no cost, as shown in the infographic in Figure 3.

H₂. Extended warranty hints no-costs sentiment.

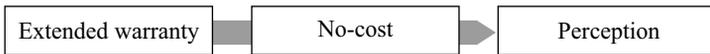


Figure 3. The no-cost signal (source: authors)

Failure of the durable product during its lifetime creates a negative reaction. It brings a brand into disrepute and leaves a mark on the emotional relationship between the consumer and the brand (Kiran & Mahesh, 2019). Among other extrinsic cues, higher market value of the brand encourages the willingness to purchase more strongly than a low-value brand (Dutta et al., 2022). The critical issue in retailing is the relationship between more and less reputable brands. In this context, the warranty concept at the time of promotion may change the perception of brand valuation. When planning a promotion for a low value brand, additional signals are needed to attract the customer therefore low-value brands are often promoted with an extended warranty to lift-up value perception. It is important to test whether communicating an extended warranty during a sales promotion can offset the difference in brands values. The product warranty can boost brand value (Erdem & Swait, 1998), but the significance of this value-boost experience is critical. If significant, the promotion of an affordable brand with extended warranty can compensate for its market deficiency compared to a high-value brand covered only by the basic warranty. The Brand variable is set up to show whether an extended warranty is perceived as a subsequent boost to brand value (Figure 4) when there is a customer dilemma about choosing between low-value brands with an extended warranty attached or high-value brands covered only with a mandatory warranty scheme. For this purpose, the third hypothesis is set:

H₃. Extended warranty changes perception of brand value.



Figure 4. The brand signal (source: authors)

Customers may perceive a product warranty as an extrinsic measure of product reliability (Kelley, 1988). It is well known that the warranty is a signal that helps to justify the quality of the product (Boulding & Kirmani, 1993; Agrawal et al., 1996). To add an extended warranty to the product, the manufacturer must invest in better materials and provide better working facilities to convince customers that the product will be impeccably reliable over a long period

of time – the warranty period. Otherwise, the manufacturer will bear the consequences of poor materials and manufacturing processes, i.e. the cost of expensive repairs. Thus, improving quality and reliability increases the price of the product. Customers can rarely convince themselves of the quality and therefore look for external signals to help them decide (Price & Dawar, 2002). They are likely to accept a slightly higher price than planned if they are enthusiastic about the quality while they examine the promotion. If the price reflects the quality of the product, the combination of a higher price and only a basic warranty can defiantly trigger the desired signal of better quality. On the other hand, a supplier with an affordable offer, but who still needs a better reputation among customers about the reliability of the product or has not been able to offer a competitive quality product, will try to convince customers to that by offering an extended warranty. When evaluating the quality of a product during a purchase decision, the customer uses his own beliefs (precursory signal), but of course this signal can be stimulated by additional promo information. To test the mental stimulation of extended warranty to perception of product quality (Figure 5), we set the fourth hypothesis:

H₄. Extended warranty leads to the perception of higher quality.

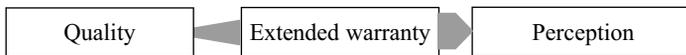


Figure 5. The quality signal (source: authors)

The last variable of the measurement model is the precursory price signal, which changes while the extended warranty is communicated. This predictor can explain the extent to which the warranty affects perceptions of price compared to perceptions of price without the warranty coverage. The warranty increases the value of the product (Vera & Espinosa, 2019). Therefore, customers may view the product with a warranty as more attractive because of the perceived added value. If a product is more expensive because it has a better warranty background, it is assumed that the price already includes costs that might occur during the warranty period. A longer warranty period would then lead to a higher price as presented by infographics in Figure 6. If the customer believes that the price has been increased due to the calculated expected cost of the warranty, promotion of the warranty is likely to signal the cost to the customer (Estelami et al., 2016) rather than the convenience and benefits. Therefore, we assume that the communication of the extended warranty changes the precursory perception about the price of the product. The following hypothesis is set:

H₅. Extended warranty leads to the perception of a higher product price.

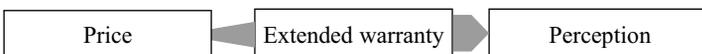


Figure 6. The price signal (source: authors)

3. Methodology

The data was collected by an anonymous online survey involving N = 190 students as a convenient sample of available respondents. The questionnaire consisted of the following elimination statement: "In the last 12 months, I had the intention to purchase a durable technical

product”; and 17 statements considered as observable variables. A total of 12 respondents had yet to purchase a durable product in the past 12 months, which is why they were excluded from the empirical sample where $N = 178$ remained. The period of 12 months is commonly used in other opinion polls (e.g. EC, 2017) as a reasonable period in which the respondents can reliably remember the mastered feelings and reactions to a non-everyday stimulus. The measurement instrument consisted of a 14-item questionnaire covering five theoretical constructs. Accordingly, the questionnaire is divided into five sections, each containing two or three seven-item Likert-type scale. The descriptive analysis of the sample is shown in Table 1. The method was used by Davidavičienė et al. (2021) when tested user experience to evaluate the overall product user experience in six fundamental dimensions (attractiveness, perspicuity, efficiency, etc.) and oppositional semantic scales that evaluate product characteristics.

Table 1. Descriptive statistics and measures’ internal reliability ($N=178$) (source: research results)

Construct	Variable	Cronbach's Alpha*	Mean	Std. Error	SD
Risk	r1	.818	4.13	.068	.879
	r2		3.93	.079	1.019
	r3		3.74	.087	1.125
Cost	c1	.710	3.54	.094	1.216
	c2		4.24	.068	.880
	c3		3.62	.095	1.230
Brand	b1	.817	4.28	.091	1.082
	b2		3.81	.104	1.239
Quality	q1	.874	3.66	.075	.974
	q2		3.32	.090	1.158
	q3		3.72	.112	1.446
Price	p1	.766	3.53	.083	1.069
	p2		3.37	.084	1.084
	p3		4.35	.068	.878

Note: *reliability coefficient of .70 or higher is considered acceptable.

The Confirmatory Factor Analysis (CFA) with maximum likelihood estimation is used as a multivariate data analysis method within structural equation modelling (SEM) to evaluate the research model and test the hypothesis. In addition, the CFA evaluates the hypothetical structure of latent structures to understand better their interrelationship (Bandalos & Finney, 2019). We chose factor analysis to condense the numerical data of the input variables (i.e. the Likert scales) into a set of theoretical factors. The results of this method are easy to interpret compared to other dimensionality reduction methods, as the result is coefficients that quantify the contribution of each variable and its group to a given factor. The quantification also provides contextual information about the contribution of each factor. The SPSS Analysis of Moment Structures (AMOS) Graphics software package was used for path diagram and analysis to test the hypothesis.

A path diagram was designed in AMOS. It covers the respondents' attitudes on all 14 statements as observable variables. The measurement model includes five constructs, among which five are exogenous and already labelled as follows: "Risk relief", "No-cost", "Quality", "Price", and "Brand". Every exogenous construct is predicted by specific items (statements) in the survey. In the end, the endogenous variable labelled "Warranty" was formed. The relationship between the exogenous and the endogenous variable will be investigated using regression coefficients. Five hypotheses tested a measurement model in which the significance of the influence of exogenous variables on the endogenous variable using standardised path coefficients was measured. Respondents expressed their agreement by scaling statements using a seven-item semantic differential scale (Likert) encoded from 1 to 7, ranging from "I strongly disagree" to "I strongly agree". Scales are designed according to previous research (Cox et al., 2006; Erdem & Swait, 1998; Xia et al., 2010). According to Mueller and Hancock (2019), a good model is determined using the following absolute and relatively good fit indices and considering certain recommended cut-off values: chi-square fit statistics/degree of freedom (CMIN/DF) < 2; goodness of fit index (GFI) \leq 1; good comparative fit index (CFI) > .90; root mean square error of approximation (RMSEA) \leq .08. SEM enables us to carry out a simultaneous analysis of explanatory relations among multiple interrelated variables, either latent and observed variables (Mueller & Hancock, 2019). Only the measurement model fit was tested.

4. Results and discussion

For structural equation models, Kline (2016) suggests that it is minimally necessary to report on four indices: CMIN/DF = 1.176; GFI = .93; CFI = .97; and RMSEA = .03. The results show that the model fits and that the CFA was successful. The result of the regression analysis confirmed the statistically significant influence of two of the five constructs (Table 2). Of the research variables, three can be categorised as those analysed by the customer from a cost perspective: Risk, Cost, and Price; simultaneously, the other two represent subjective attitudes.

Table 2. Regression weights and hypothesis testing (source: research results)

Construct	β	Std. Err.	Z	P	Hypothesis testing
Risk relief \rightarrow Warranty	.798	.100	8.010	***	H_1 confirmed
Cost \rightarrow Warranty	.097	.069	1.412	.158	H_2 not confirmed
Brand \rightarrow Warranty	.039	.037	1.045	.296	H_3 not confirmed
Quality \rightarrow Warranty	.360	.075	4.829	***	H_4 confirmed
Price \rightarrow Warranty	.020	.047	.439	.660	H_5 not confirmed

The risk relief perception significantly stimulates purchasing decisions ($\beta = .798$, $Z = 8.010$), confirming H_1 . If a warranty exists, the product will not disappoint with its performance. The regression coefficient for this variable is by far the highest in the model. Customers enjoy the feeling that someone else is taking a long-standing risk of a defect in the product. Communicating the extended warranty during the sales promotion removes this sense of stress as an essential part of the decision-making process, making the offer more attractive and less

risky. This confirmation supports previous contributions (Goldsmith, 2016). Other extrinsic or intrinsic features emerge if multiple offers include the same warranty coverage. Extended warranty information conveys the message of higher product quality ($\beta = .360$, $Z = 4.829$), which confirms H4. As in the results of Noll (2004), the extended warranty sends a signal to customers that leads them to consider the product with higher quality as more valuable than without warranty.

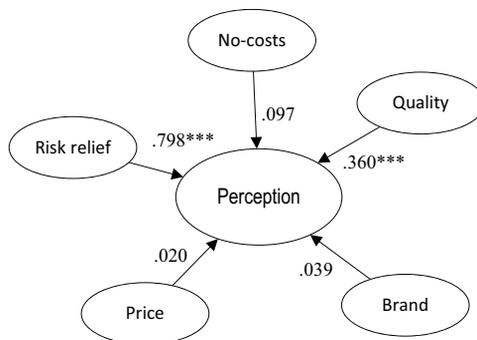


Figure 7. Standardised regression weights (β) of the measurement model (source: research results)

Examination of the remaining variables in the measurement model shows that they have no significant positive or negative influence on the perception of the extended warranty (Figure 7). The results show that attached extended warranty creates an idea of economic benefits (avoidance of costs over time), but not significantly (H_2 was not confirmed). Furthermore, promoting extended warranty does not compensate brand value. Customers do not perceive a low value brand product with an extended warranty attached as more valuable than a prestigious brand without it (H_3 is not confirmed). This is consistent with the findings of Kiran and Mahesh (2019), who argued that the brand is remembered in lieu of other temporary cues that the customer encounters in the store and usually forgets after the visit. However, others (Kurt et al., 2021) believe that the extended warranty, if part of branding and included in promotion, can positively influence the customer's perception of the brand, especially the weaker one as far as the stronger one is concerned. Although warranties increase the value of the product, customers do not see the warranty as a factor that increases the sales price (H_5 is not confirmed). Customers are aware that retailers in the market also offer the possibility to extend the warranty at an additional cost (Estelami et al., 2016) namely commercial warranty, so they compare such an offer with a price that already includes an extended warranty. In addition, affordable brands are more often offered with an extended warranty period to attract customers bonded with more prestigious brands (EC, 2015).

4.1. Limitations and future research

There are limitations in our research that could stimulate future work. Firstly, the consumer warranty may elicit different perceptions than those included in the measurement model, such as safety, environmental friendliness, functionality, or durability. Therefore, it can be extended in the future by including additional signals or manifested variables that promise

to contribute to the positioning of warranty concept in the advertising theory. There is a lack of knowledge about how customers perceive a high-quality brand with only basic warranty coverage and how they choose between an inferior brand and a high-quality brand, both coupled with an extended warranty. Retail promotion of durable products, driven by extended warranty information, is likely to lead to slightly different perceptions when different durables categories involved and when communicated in a physical or online store. Future work should examine these probable differences more closely. Pricing is the most important marketing strategy in retailing, so the impact of the extended warranty on pricing could also be a motivation for the future research. There is no evidence how customer segmentation is related to the subject. This would improve the understanding of which segment should be targeted to increase the effectiveness of this marketing strategy. Findings of Titko et al. (2021) show how generations of respondents react differently to marketing signals. Therefore, the number of respondents and focusing on only one segment (students) of the consumer population are clear limitations of empirical research, which is why results may vary.

4.2. Managerial implications

Paper has important managerial implications. As a part of sales promotion of white, brown and grey durables, retailers mainly communicate the free extended warranty as a marketing strategy to attract customers alongside other popular promotions such as "Best Buy" or "% Promo Code". In this way, retailers send marketing signals to customers. The extended warranty is considered a risk relief concept because the product is so reliable that it will perform its function perfectly with no cost of failure. If there are more promotional cues and the warranties are the same for two products, the customer is likely to consider an alternative product. For price-insensitive customers who value quality, the extended warranty will be an additional incentive to accept the offer. The warranty ensures that customers will bear the costs if the product no longer meets expectations. Therefore, communicating longer warranty period has a positive effect on most customers when they evaluate and compare offers. Our findings show, however, that the function of the warranty to cover repair costs is relatively insignificant in the purchase of durable consumer goods. Furthermore, the results show that the product covered by the warranty is not perceived as more expensive. This means that when comparing alternatives with comparable prices (e.g. = 549 EUR and = 579 EUR), an offer with a longer warranty may trigger a decision, but this is probably not the case for offers with a larger price difference (e.g. 549 EUR versus 679 EUR).

The warranty period has no influence on the market penetration of the brand. Customers choose a product by weighing several attributes such as functionality, design, price and prestige, and they consider quality through dimension of reliability and durability. Low-value brands do not offer prestige like high-value brands, but they are unlikely to be able to compete on features other than price, and so this becomes the most important, but not the only, marketing factor in their sales. Promoting the extended warranty is unlikely to change the existing image of the high-value brand, but it will increase the perception of the quality of the low-value brand. Not offering an extended warranty for a high-value brand does not reduce the attractiveness of the offer compared to a low-value brand with a competitive extended

warranty. The retailer has more advantages without an extended warranty for high-value brands than with their inclusion in the offer.

When promoting the extended warranty, management can generally increase the attractiveness of the durables offering and increase sales by promoting extended warranty. However, as explained earlier, this risk is sometimes necessary because the extended warranty is the starting point for additional costs. The extended warranty can be used to increase the price because customers perceive it positively because they do not classify it as an attribute that increases the price, such as transport.

Conclusions

When buying durable goods, customers look for potential value and long-term benefits. The extended warranty as a marketing strategy offers specific values and benefits that are perceived differently by customers. Different perceptions arise among customers when they are confronted with an extended warranty as part of the sales promotion to increase the attractiveness of the offer. It has already been studied how the length of the warranty period influences the purchase decision (Erdem & Swait, 1998). However, in our empirical model, we proposed the construction of an extended warranty through the mediation of a unique combination of five signals: risk relief, no cost in the future, higher quality, increased price effect and increased brand equity. Each of these signals was tested as a separate hypothesis. The empirical work is based on the collected data and the measurement model was tested using factor analysis.

Previous research has already confirmed that there are differences in customer perceptions when it comes to extended warranties in sales promotion (Estelami et al., 2016; Chark & Muthukrishnan, 2022). Our results contribute to the theory of signalling. Five signals were tested in our model. We have shown which two have a significant influence on the direction of the decision-making process. It is also important to see the role of the remaining three signals that do not significantly influence the perception. The extended warranty creates an image of relief from the risks associated with using the product (Cox et al., 2006; Işçi & Kitapçı, 2020) and leaves an image of higher quality (Price & Dawar, 2002). Customers do not believe that the extended warranty increases the price, which has not yet been studied (Estelami et al., 2016). The findings of Kiran and Mahesh (2019) were confirmed, who also concluded that the extended warranty does not affect the brand as it does not enhance the reputation of a low level brand at the expense of the prestigious brand. The results also contribute to a certain part of the advertising theory, where additional information is provided to increase the value of the retailer's offer. In advertising theory, warranty is seen as an indicator of better quality and reliability (Xia et al., 2010; Cordella et al., 2021). This study sheds light on the concept as it shows that the risk mitigation aspect can be added to the aspects investigated so far. The findings of Kiran and Mahesh (2019) were confirmed, who also concluded that the extended warranty has no impact on the brand, as it does not strengthen the reputation of a low-level brand at the expense of the prestigious brand.

Management may set unreliable marketing targets if they believe that the extended warranty gives the customer the impression that the costs that may be incurred during the

warranty period are already included in the price. This may discourage management from making profit margins and setting prices. Warranties can increase the attractiveness of the offer by giving the impression of higher quality. In addition, communicating warranty is also perceived by customers as a sign of long-term risk reduction. This has relevant consequences for promoting retail sales of durable technical products (e.g. refrigerator, TV). For retail management, the expected lower risk has to play a key role in the retail marketing strategy to increase sales of durable goods categories. Despite some limitations, this study shows that other predictive variables included in the empirical study do not have a significant positive or negative impact on a purchase decision.

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