DOCTORAL (PhD) THESIS

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KAPOSVÁR CAMPUS

THE IMPACT OF SUSTAINABILITY ON LUXURY
CONSUMPTION BEHAVIOUR – ANALYSIS
WITHIN THE
GERMAN LUXURY GOODS INDUSTRY

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2023

2023

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CHAPTER 1

INTRODUCTION

1   Introduction

Luxury and *sustainability*: prima facie these two terms seem to be diametrically opposed and incompatible. Particularly in connection with consumer behaviour, luxury is often equated with the ruthless waste of resources (Voyer and Beckham 2014, p. 245). At the same time, environmentally and socially accepted products are assumed to lack the shine and extravagance connected to luxury brands (Janssen et al. 2014, p. 45).

Even though this description of luxury might be accurate for the luxury industry in the 20th century, it can be assumed that the growing sustainability megatrend is affecting the evolution of today's luxury brands, products, and communication (Amatulli et al. 2018, p. 277). Among the many reasons for environmental awareness two major drivers for the public relevance can be accentuated. Firstly, a more sustainable and environmentally sensitized society has direct impact on the private sphere and public well-being (F.e Active waste management and pollution reduction). Secondly, the attention that is being paid to sustainability by the mass media significantly contributes to sensitizing the population and increases public awareness. The digitalization also plays a decisive role in this context: Due to its ubiquitous character the internet enables comprehensive information and improved transparency for all parts of society as well as business units. As a result, trends like sustainability are being actively promoted while companies are adapting their communication strategies. Thus, a new type of consumer has emerged in recent years who has an increased focus on the ecological dimension and intensified curiosity for background information's.

In their role and function as consumers, citizens have significant influence on businesses. The changed information behaviour and the associated

changed consumption habits lead to an inevitable process to rethink existing value creation structures on the business side. Increasing pressure to adapt also arises from the fundamental imperative of supply and demand in the relevant market - because "the markets of the future are green" and luxury consumers are high demanding and critical (Prüne 2013, p. 22; Kapferer and Michaut 2015, p. 4).

Thus, even the luxury industry, which used to be the opposite of sustainable, is now inevitably affected and challenges arise (Janssen et al. 2014, p. 45). The resulting question for companies and their strategic as well as operational management is how sustainability is influencing their customers' expectations and how long-term competitive advantages can be created (Kapferer and Michaut 2015, pp. 4–5).

To successfully address this question, it is inevitable to firstly find a common definition of the term *luxury.* There is not yet common ground among researchers and no unified definition has been agreed on. Nevertheless, it is essential for this work to stipulate a coherent understanding of the luxury industry as a business section. In the context of this dissertation and research work, luxury goods comprise highly exclusive personal items that convey the taste and status of their owner (Lüdemann 2019, p. 5). This includes personal luxury goods, luxury cars, luxury hospitality, fine wine and spirits, gourmet food and fine dining, fine art, furniture and homeware, private jets, and yachts as well as luxury cruises. Condensed the global luxury goods market accounts for €1,171B in 2018 and is expected to growth with an average of 2-5 % annually. These numbers underline the international relevance of the luxury goods market as an important and continuously growing industry (D'Arpizio and Levato 2018).

Deducted from the ties between sustainability and luxury, the following overarching research question forms the basis for this work.

How is the evolution towards a sustainability-oriented society influencing consumer behaviour of luxury consumers?

- *How do companies within the industry observe this transformation and may or may not adapt their strategy?*
- *How do luxury consumers rate the relevance of sustainability with regard to their purchasing decisions?*

In summary of the above it can be stated that megatrends have the tendency to disrupt and permanently change markets and industries. The undeniable fact that our society is currently undergoing sustainability related changes has formed the motivation to scientifically investigate the connection between luxury brands, manufactures and their consumers. Being a professional in the luxury goods industry for almost 10 years has opened the opportunity to utilize insight knowledge, strategies and contacts for field studies and gathering non-public data. The luxury goods industry is notoriously secretive and being able to combine scientific research with industry insights to develop strategic guidelines has been a core objective. Additionally, the company *Questfox* provided their innovative questionnaire software to gather additional information on the intrinsic answering behaviour. In summary, the combination of luxury industry, consumer behaviour and innovative software was the significant moving reason to carry out the present work.

CHAPTER 2

AIMS AND OBJECTIVES

2 Aims and Objectives.

The presented aims and objectives of this work are deducted from the literature review. This has shown that sustainability is a continuously important trend in our society with significant potential to interrupt existing paradigms. This is including changes in consumer preferences, demands and behaviour. Therefore, companies are forces to revaluate their current position in the market as well as their outlook. While the effects on the fast-moving consumer goods industry have already been researched in many ways, a research gap has been identified about the significance for the luxury goods industry. Furthermore, the literature has shown that the requirements and the business environment of luxury brands differ significantly from those of the fast-moving consumer goods industry. Accordingly, the evaluation of the impact of sustainability must be specific to the luxury industry and include a differentiated comparison of industry and consumers. Accordingly, the further course of research is oriented to the following overarching guiding questions and aims to compare industry and customers and ultimately to derive practice-oriented recommendations for action.

1. Is sustainability relevant for companies in the luxury industry?

2. What sustainability measures are currently being implemented by companies in the luxury industry?

3. How do customers interpret the link between luxury and sustainability?

4. Does sustainability play a role in consumer behaviour?

5. The chosen research mythology consists of a qualitative and a quantitative part that systematically build on each other. The chosen approach is based on the objective of comparing the view of the industry with the opinion and perception of the consumers and to gain new insights and recommendations for action. For this reason, expert interviews are conducted with executives from the luxury industry, based on which the research questions are developed into hypotheses. With the help of a consumer survey, the evaluation of the hypotheses is carried out. Furthermore, the study of consumer behaviour involves personal motivations of customers and, especially regarding sustainability, the factor of socially conforming adaptations of response behaviour must be included in the research. For this reason, the research methodology selected for the consumer survey includes the possibility of differentiating between intrinsic and extrinsic responses.

As the schematic diagram in Figure 1 below illustrates, the work consists of various theoretical and empirical elements that are systematically combined and are intended to enable a holistic view of the research object.
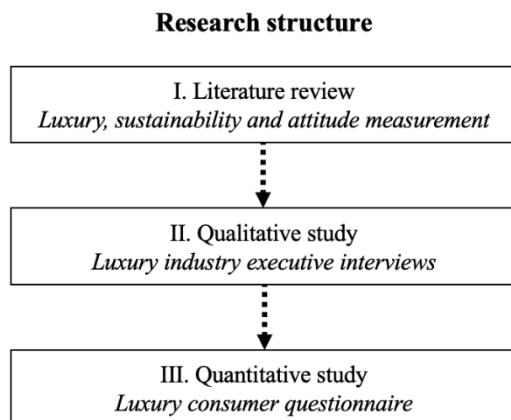
Research structure

Figure 1: Research structure

Part 1 consisted of an extensive literature review to proof the relevance of the chosen research area and summarize the current state of science regarding sustainability, luxury, and attitude measurement. This research has then been conjunct and enlarged to find references, publications, and work, addressing the same specific connection of luxury and sustainability. Based on the literature review, the research question has been further specified and the need for more specific topic related information has been distinguished. This finding has verified the decision to proceed with Part 2 and create a semi-structured interview guideline and perform qualitative study with upper management and strategic decision makers of luxury companies, aiming to gain further insights and knowledge. With the methodology of semi-structured interviews and qualitative content analysis, it is possible to approach the research question with the greatest possible openness. This leads to a detailed and subjectively perceived account of the causal relationships, in the case of this work, between sustainability and its impact on the luxury goods industry (Grützmacher 2020; Pietzcker and Vaih-Baur

2018; Prüne 2013). The basic idea of qualitative content analysis was to build on the rule-based systematic principles of quantitative content analysis. Furthermore, qualitative procedures that do not exclude quantitative analyses (category frequencies) have been developed and substantiated for a variety of qualitative text analysis tasks (summarizing, explicating, structuring text material) (Flick et al. 2004). The scientific community and literature have presented various guidelines and approaches for the systematic elaboration of qualitative datasets. Among the best-known proponents of this method of research and analysis is Mayring (Mayring 1991; Flick 1991). Therefore, Mayring's approach was chosen for this work, and his eight-step guide was adapted and condensed into an agenda specifically tailored to the needs of this analysis (Mayring 1991, 209ff.). In the third part, the results of the quantitative study are quantitatively verified by means of a consumer survey and cluster analysis.

CHAPTER 3

ANALYSIS AND FINDINGS

3   Analysis and Findings

The interviews are analysed and summarized by forming content-related categories. The basic structure of the interviews continues to serve as a guide. However, the content-related statements are linked across questions and interviewees. Furthermore, external references and studies are integrated and used for cross-referencing, the following is a summary of the key statements made by the interviewees.

3.1   Environmental sustainability in the luxury industry

The unanimous opinion of the respondents showed that the topic of sustainability is attributed a steadily growing importance for the luxury industry. Each of the companies surveyed also indicated that they had already begun evaluating ways to adapt to this megatrend. The influence of sustainability is growing accordingly and is becoming increasingly relevant for day-to-day business and customer relations. Luxury consumers' demands on products are changing, and companies need to adapt their portfolios accordingly. Environmental sustainability is currently seen as one of the biggest challenges, and at the same time, opportunities for the luxury industry, and will continue to grow in importance, mainly because the CO_2 footprint of luxury consumers is significantly higher than average (Lynch et al. 2019, p. 377). From a historical perspective, luxury is strongly associated with a dissolute and lavish lifestyle, and sustainability has been neglected in recent decades. Based on the interviews it can be deduced that companies need to control and optimize their value chain to achieve their own environmental goals, but also to avoid social pressure from their customers (Lynch et al. 2019, p. 377).

The major luxury conglomerates have launched extensive transparency campaigns in response to massive pressure from environmental activists, politicians, and not least, their customers. As a result, pressure has been put on all companies in the industry to challenge their environmental impacts and provide transparency to customers and stakeholders. In this context, it is also important to point out the often-long supply chains through Far Eastern production, which have a significant impact on the overall CO_2 footprint of luxury products in Europe. Overall, the work of *Lynch*, *Long, Stretesky*, and *Barrett* found that the environmental impacts of customers in the luxury segment remain significantly higher than those of ordinary consumers, a finding confirmed by *Kenner* and *Grützmacher* as well as by the statements of the companies surveyed (Kenner 2015; Lynch et al. 2019; Grützmacher 2020). Nevertheless, this question has shown that customers are becoming increasingly aware of the environmental impact of their purchases and that this trend is also affecting the luxury industry. Another important aspect of the modern interpretation of luxury is dematerialization, which is a decisive purchasing argument for a new target group with purchasing power, but which has grown up with luxury. These predominantly younger buyers are looking for sustainability-oriented luxury experiences and are less focused on material luxury (Bosshart et al. 2019). However, this target group defined by *Bosshart*, *Gurzki*, and *Mei-Pochtler* was not a central part of the present study but must be mentioned for the sake of completeness. In the further course, the materialistic luxury is in the foreground.

It becomes clear that the reduction of CO_2 emissions is a central starting point for sustainable economic corporate management. However, reducing CO_2 emissions alone is a general measure and not specific to luxury companies. This also applies to the offset of Co_2, which is also becoming

increasingly important in the luxury consumer segment. When asked for more specific details, interviewees emphasized above all the optimization of production processes and the reduction of employee travel through the introduction of digital structures. Furthermore, many companies are reducing printing and the use of paper. Reducing water and avoiding plastic also fall into this category. One specific measure that has been mentioned several times is the recycling of second-hand products and materials. This approach is particularly common in the luxury fashion industry (Cimatti et al. 2017).

Some companies mentioned sustainability-related adjustments to their product portfolios and the introduction of alternative raw materials. In the case of product portfolio adjustments, the long-term sustainability of measures to promote ecology must be discussed controversially elsewhere, especially in the case of electromobility and the associated demand for lithium batteries. Some companies have not changed their product portfolio because it already meets modern requirements for sustainable ecological product design and production. In this case, however, a focus on the use of sustainable energy sources such as solar is worth emphasizing. One aspect highlighted by several companies is the reduction of plastic packaging material and the exploration of alternative biodegradable packaging. However, customer expectations are often a problem here. High-priced products are expected to come in high-priced packaging with a corresponding look and feel. In practice, it is still difficult to produce these with biodegradable materials. Overall, it can be seen that almost all companies are implementing targeted measures to make their business activities more environmentally sustainable.

3.2   Social Sustainability in the Luxury Industry

According to the participating companies, the social component or corporate responsibility in the social area is becoming increasingly important for companies and the luxury sector. Modern sustainability goes far beyond the ecological aspect. For a holistic sustainability concept, social factors must therefore also be considered. The luxury industry is committed to a strong sense of social responsibility. Part of the new luxury is taking care of your employees and your community. Providing customers with products and services that go well beyond what is necessary is only accepted by society if it includes a certain giveback.

Although the importance of social sustainability was emphasized by all companies surveyed in the previous question, the answers to the question about specific measures varied. Only half of the respondents were able to provide specific information on the social sustainability concept in their company, while the other half were unable to name any specific measures.

Social responsibility and sustainability also mean that people who are less privileged can use part of the margin to expand social programs. In conclusion, the luxury industry needs to be holistic in the social sphere, in line with the demands and expectations of its discerning clientele.

All but three respondents indicated that they did not communicate their social sustainability strategy externally. The measures communicated externally are predominantly fundraising campaigns and revenue participation campaigns for the benefit of social projects, which are used to create media attention and a positive effect on the brand image. Furthermore, although measures to ensure compliance standards along the value chain are an

integral part of the social and environmental sustainability concept at some companies, they are not communicated or made transparent to customers.

3.3 Economic Sustainability in the Luxury Industry

The economic sustainability of luxury companies caused difficulties for the interviewees. In many cases, the topic has not yet been considered in a differentiated way. Economic sustainability relates to both the economic processes within the company and to long-term customer loyalty. In principle, every company in a free-market economy must operate economically to survive, so the focus of this question is on concrete measures to ensure long-term success. A sustainable success strategy means for companies to continuously develop with intrinsic motivation and to adapt to new market conditions. This change has not yet been noticed by all traditional luxury brands.

The modern kind of luxury is focused on experiencing and consciously perceiving. This includes the traceability of production chains and close personal identification with the brand offering the product or service. The luxury brand is therefore forced to reconnect with its customers, although it must maintain its limited availability and scarcity. The concept of sustainability is now closely linked to quality, so it is essential for premium-priced products to meet this standard. Customers are expected to have a strong focus on sustainability while expecting high-end luxury. Companies will therefore have to invest in suitable solutions. It should be emphasized that the expectations go well beyond a reduction in CO_2 emissions and the sustainability approaches already in use. These will be defined as basic requirements in the future. Especially for young companies with flexible structures, these fundamental market changes can offer a great opportunity for market entry.

Sustainability and change are sometimes viewed critically, although the experience of the interviewees shows that measures to promote sustainability can also promote economic success. A reduction in production costs can be achieved by optimizing the use of resources. This results in two positive effects with regard to the sustainability of the company. A similar effect is achieved when energy is generated by wind or the sun. The interest in and need for ecological sustainability and social sustainability are much more pronounced than the awareness of economic sustainability. Overall, it must be mentioned at this point that the opportunity to be sustainable through the choice of resources used for products is itself a luxury and should not be underestimated.

3.4 Results of quantitative analyses

In summary, it can be concluded from the responses of the qualitative research that there is an increasing demand for environmental sustainability, but not yet an increased interest in monitoring these measures. Campaigns around the topic of sustainability are becoming more popular, but at present, they can hardly be distinguished from greenwashing measures. If the trend towards sustainability and the associated traceability continues in the luxury segment, companies will have to back up their promises with transparency.

Derived from the results presented in the previous course, the following hypotheses have been developed as the central element to verify the industry assumptions and customer opinions.

H1: Sustainability should be an integral part of luxury products.

H2: Ecological facts are decisive for a luxury product purchase decision.

H3: Social facts are decisive for a luxury product purchase decision.

H4: Economical facts are decisive for a luxury product purchase decision.

To investigate the above hypotheses, a consumer survey has been developed and conducted. The following paragraph summarizes the technical parameters and basic facts of the quantitative study. The survey took place from January 9 to February 9, 2022, and 385 persons participated. In total, the target of 300 participants was reached during the field phase.

Out of 385 starters, 86 % of participants completed the entire survey. To have accurate data a cleansing process has been conducted and all unfished surveys have been eliminated from the data set. A total of 332 surveys are valid for further analysis.

The link between luxury and sustainability has been studied individually in four hypotheses. Here, H1 is more generic and consists of only one question. However, this question examines the basic attitude as to whether sustainability should be a component of luxury products. The other three hypotheses each consist of three individual questions. These deal with the subject area of the hypothesis. A distinction is made between ecological, social and economic. For the evaluation of H2 - H4, the answer options of the respondents have been given a value. Answer "Yes" = X and Answer "No" = X.

H1: Sustainability should be an integral part of luxury products.

Based on the guideline-study interviews, the hypothesis was derived that sustainability should be an integral part of luxury products for customers. This hypothesis can be tested analysing the results of question Q20. The following table 8 shows the data basis for further analysis.

Q20: Do you think sustainability must be an integral of a luxury product?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 yes	149	44,9	82,8	82,8
	2 no	31	9,3	17,2	100,0
	Total	180	54,2	100,0	
Missing	-77	142	42,8		
	3 I don't know	10	3,0		
	Total	152	45,8		
Total		332	100,0		

Table 1: Descriptive overview H1

To reject or confirm the hypothesis H1 a non-parametric test has been performed. The results are shown in Table 1.

	Category	N	Observed Prop.	Test Prop.	Exact Sig. (2-tailed)
Group 1	<= 1	149	0,83	0,50	0,000
Group 2	> 1	31	0,17		
Total		180	1,00		

Table 2: Non-parametric test H1

Of the 140 valid responses, 83% of respondents indicated that sustainability should be an integral part of luxury products. According to the evaluation in Table 2, there is significant agreement and hypothesis H1 can be accepted.

H1: Sustainability should be an integral part of luxury products.

Accepted

Confirmation of the hypothesis means that the consumer opinion is consistent with the anticipated consumer attitude by the industry executives.

H2: Ecological facts are decisive for a luxury product purchase decision.

Hypothesis H2 deals with the question of the relevance of ecological factors for the purchasing behaviour of luxury consumers. For this purpose, respondents were asked to answer three questions in connection with ecology and luxury products as well as individual purchasing behaviour. Table 9 summarizes the descriptive data.

		Q11 Are you aware of the manufacturing processes of the luxury product you purchase?	Q12 Is the country of origin relevant for your luxury product purchase decision?	Q13 Is a good environmental footprint of a luxury product essential for your purchase decision?
N	Valid	179	181	181
	Missing	153	151	151

Table 3: Descriptive statistics H2

Answers have been declared valid if the respondent has purchased luxury products in the past 12 month and replied to the question with yes or no. Answers stating "I don't know" are considered invalid and have been added to missing as well.

Q11 Are you aware of the manufacturing processes of the luxury product you purchase?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 yes	45	13,6	25,1	25,1
	2 no	134	40,4	**74,9**	100,0
	Total	179	53,9	100,0	
Missing	-77	142	42,8		
	3 I don't knoiw	11	3,3		
	Total	153	46,1		
Total		332	100,0		

Table 4: Descriptive statistics Q11

The above table 4 shows the distribution of valid and for hypothesis appraisal invalid answers as well as the allocation of yes and no replies among the total of 179 valid answers. 74.9% of respondents stated that they were not familiar with the production process of the luxury goods they bought.

Q12 Is the country of origin relevant for your luxury product purchase decision?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 yes	100	30,1	55,2	55,2
	2 no	81	24,4	44,8	100,0
	Total	181	54,5	100,0	
Missing	-77	142	42,8		
	3 I don't know	9	2,7		
	Total	151	45,5		
Total		332	100,0		

Table 5: Descriptive statistics Q12

The above Table 5 shows the distribution of valid and for hypothesis appraisal invalid answers as well as the allocation of yes and no replies among the total of 181 valid answers. 55.2% of respondents stated that a products country of origin was relevant for their purchase decision.

Q13 Is a good environmental footprint of a luxury product essential for your purchase decision?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 yes	94	28,3	51,9	51,9
	2 no	87	26,2	48,1	100,0
	Total	181	54,5	100,0	
Missing	-77	142	42,8		
	3 I don't know	9	2,7		
	Total	151	45,5		
Total		332	100,0		

Table 6: Descriptive statistics Q13

Table 6 shows the distribution of valid and for hypothesis appraisal invalid answers as well as the allocation of yes and no replies among the total of 181 valid answers. 51.9% of the respondents stated that a good environmental footprint is essential for their luxury good purchase decision.

To reject or confirm the hypothesis H2 it is necessary to link the three relevant questions displayed above. To establish comparability, numerical values have been assigned to the answers creating an index consisting of: Yes = 1 and No = 2.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3 3x yes	26	7,8	15,5	15,5
	4 2x yes, 1x no	50	15,1	29,8	45,2
	5 1x yes, 2x no	40	12,0	23,8	69,0
	6 3x no	52	15,7	31,0	100,0
	Total	168	50,6	100,0	
Missing	System	164	49,4		
Total		332	100,0		
Mean		4,70			
Median		5,00			
Minimum		3			
Maximum		6			

Table 7: Testing of hypothesis 2

Based on the values shown in Table 7, a one-sample Wilcoxon signed rank test is executed.

One-Sample Wilcoxon Signed Rank Test Summary

Total N	168
Test Statistic	6150,000
Standard Error	360,206
Standardized Test Statistic	7,328
Asymptotic Sig.(2-sided test)	0,000

Table 8: Wilcoxon Signed Rank Test H2

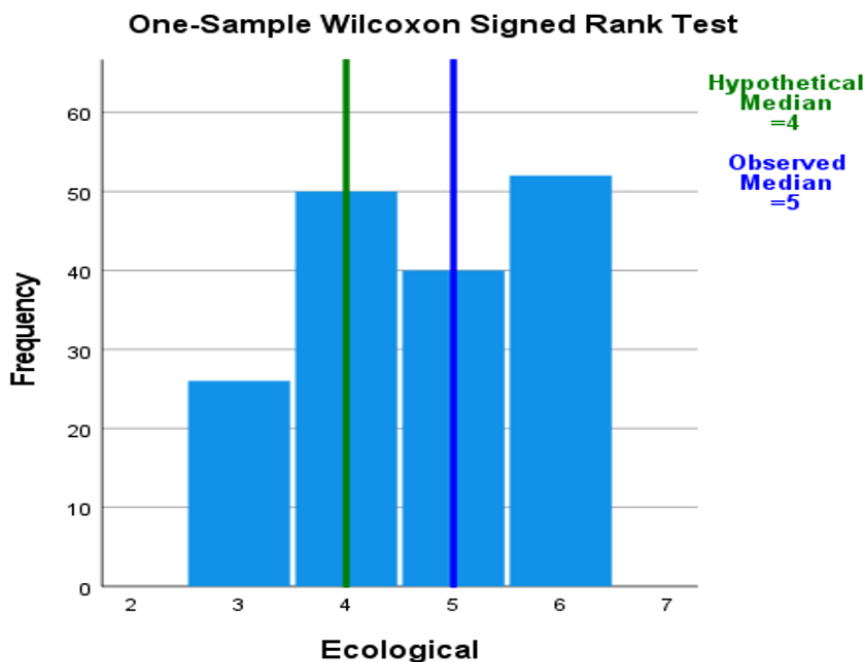The Asymptotic Sig. is lower than 0.5 and therefore significant.

Figure 2: One-Sample Wilcoxon Signed Rank Test H2

The hypothetical median of =4 would mean a perfectly balanced opinion of the subjects. The mathematically proven shift to a median of =5, which can be seen in graph 2, means an overall higher rejection of the customers

on the question of whether ecological aspects play a decisive role in the purchase of luxury products.

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.[a,b]	Decision
1	The median of Ecological equals 4.	One-Sample Wilcoxon Signed Rank Test	0,000	Reject hypothesis.

a. The significance level is ,050.

b. Asymptotic significance is displayed.

H2: Ecological facts are decisive for a luxury product purchase decision.

Rejected

The rejection of the hypothesis means that the consumer opinion diverges from the anticipated consumer attitude projected by the industry executives. The other hypotheses have also been analysed based on the scheme shown and rejected or accepted accordingly.

H3: Social facts are decisive for a luxury product purchase decision.

Rejected

H4: Economical facts are decisive for a luxury product purchase decision.

Accepted

3.5   Interpretation of the results

The evaluation of the hypotheses showed that sustainability is important to consumers, as demonstrated by H1. The customer opinion anticipated by the industry has thus been confirmed. However, the detailed analysis revealed that there are considerable differences in the sub-areas of sustainability defined by corporate social responsibility. The environmental

sustainability of luxury products has been described by the industry as essential and particularly important for customers. However, the evaluation of H2 showed that customers are interested in sustainability in general but are not familiar with the details of ecological factors or the production of luxury goods. From this contrary result it can be deduced that the customers of luxury products basically expect sustainable products and consider this aspect as given, but at the same time do not deal with the actual product-related details. This assumption is also supported by the third hypothesis regarding the social components. In questions belonging to H3, the test persons were asked to what extent they deal with the background of a product relevant for social sustainability before they buy it. It became apparent that, as in H2, no detailed knowledge is obtained before the purchase. In H4 the consumers were asked to what extent economic factors influence their purchase decisions, the response differ. The assumption that factors such as longevity and value enhancement have a decisive influence on purchasing behaviour was confirmed. Overall, it can be concluded that sustainability is considered relevant and important by consumers, but apart from the economic factors, no direct relevance for consumer behaviour is discernible and the social and ecological factors are not verified prior to purchase. The evaluation of the response behaviour as well as the subsequent hypothesis evaluation serve as quality control in addition to the confirmation or rejection of the individual points. The data showed that the opinions and emphases on the part of the test persons varied, and thus it can be assumed that the participants actively dealt with the questions, which can be used as a general quality indicator.

3.6 Outcome oriented comparison of the studies

In the following part, the results and findings of the qualitative and quantitative studies are compared and analysed. In particular, the statements of the industry must be compared with the responses of the customers, and implications for the luxury industry are derived from the results. The omnipresent trend towards more sustainability has been shown and confirmed in the first part of the thesis by the industry executives. Accordingly, a comparison of the assessment and attitude on the part of the consumers and the industry is indispensable. In the case of congruence, all four hypotheses would have been confirmed - this is not the case, as can be seen from the previous section. For this reason, a detailed analysis of the consumers' opinion regarding their assessment and relevance of sustainability on consumer behaviour will be carried out.

The hypothesis that the luxury industry is influenced by sustainability and that sustainability is a relevant attribute of luxury products and thus has an influence on the purchase decision of the consumers received above agreement and significant agreement from the consumers. However, in the detailed analysis of the relevant components of sustainability, serious differences were found between the opinion of luxury company executives and the opinion of consumers. A significant influence of ecological sustainability factors on the purchase behaviour was not confirmed by the consumers. In detail it became clear that the consumers do not explicitly inform themselves about the production of the products before the purchase. Combined with the previous statement it can be deduced that consumers in principle attach importance to sustainability but do not actively deal with the actual sustainability parameters before purchasing luxury products. This behaviour has not been anticipated by the industry, where the marketing of

sustainable production as an incentive to buy has been reconsidered. Consequently, the luxury goods industry is very different from the FMCG industry in this respect. From the industry side, social sustainability aspects and their relevance for the customer have been highlighted in the guideline-based survey. The consumer survey contradicted the industry's assumption. The offerings highlighted by the industry as particularly crucial, such as corporate social responsibility reports, are not accepted by customers. In contrast to the previous attitudes, economic sustainability and the value of conservation equated with it have a significant influence on the purchasing behaviour of customers. On the part of the industry, this factor has been assigned the lowest relevance. For the customers, however, the quality and value relevant factors are the most decisive. From the two studies and the subsequent evaluations, it can be concluded that sustainability also plays an important role in luxury, although the individual factors are weighted differently. It can be concluded that sustainability is considered a generally given prerequisite for luxury products due to its relevance for customers. Thus, the individual parameters for the product individual purchase decision move into the background. For the luxury industry, this means that no advertising should be done with sustainability, because this is not considered to be a purchasing decision, but it is imperative that the products and companies act sustainably, because the customers have this basic expectation. Accordingly, little can be gained with a communication focus on sustainability, but more can be lost if standards are not met. If companies do not meet society's expectations in terms of sustainability, customers will take this into account in their purchasing decisions.

3.7 Results of Cluster Analysis

In the further course of the quantitative analysis, a segmentation of individual customer groups was carried out with the aid of a cluster analysis. This enabled four different clusters to be formed, which exhibited homogeneous characteristics regarding consumer behaviour. For luxury brands, this results in the task of finding a paradigm shift-compliant approach to the ideas and wishes of the customers. The identified clusters can be used as a guide for industry to adequately target consumers based on their preferences. The discrepancy in the communication of sustainability for luxury products and consumers described in the previous section is decisive here. Furthermore, the clusters can be used to align the product portfolio and a correspondingly market-oriented product range selection.

The following items were included in the cluster analysis:

Item 1: Is the image of a luxury brand decisive for your purchase decision?

Item 2: Is the quality of a luxury product decisive for your purchase decision?

Item 3: Are you aware of the manufacturing processes of the luxury product you purchase?

Item 4: Is the country of origin relevant for your luxury product purchase decision?

Item 5: Is a good environmental footprint of a luxury product essential for your purchase decision?

Item 6: Do you inform yourself about the history of a luxury brand before purchasing their product?

Item 7: Do you look for a brand's corporate social responsibility report before you purchase their product?

Item 8: Is social sustainability important to you when deciding to purchase a luxury product?

Item 9: When you purchase luxury products, do you expect them to be of higher quality than conventional products?

Item 10: Is the longevity of a luxury product compared to conventional products a decisive purchase argument for you?

Item 11: Is the potential increase in value of luxury products compared to conventional ones a decisive purchase argument for you?

Item 12: Do you think sustainability must be an integral part of a luxury product?

An analysis of possible outliers was disregarded due to the answer formats of all items (1 = yes, 2 = no, 3 = I don't know). Based on the guidelines for scientific cluster analyses only items with similar answer formats should be included in a cluster analysis. The necessary requirements were met. Missing values can influence the result of the cluster analysis. However, seeing as there were no missing values in this data set, the complete data of N=190 people could be included in the cluster analysis (Backhaus et al. 2016).

A hierarchical cluster analysis was chosen because an exploratory approach to the number of clusters was planned. Due to the categorical scale level of the included items, 'complete linkage' was chosen as the linkage method (Härdle et al. 2015). Chi^2 was chosen as the measure of clustering because the items had a categorical scale level. The cluster analysis dendrogram can

be viewed in the Appendix. The frequencies of test-persons within the Clusters can be seen in Table 9.

Cluster 1

		Frequency	Per-cent	Valid Percent	Cumula-tive Per-cent
Valid	Cluster 1	31	16,3	16,3	16,3
	Cluster 2	20	10,5	10,5	26,8
	Cluster 3	85	44,7	44,7	71,6
	Cluster 4	54	28,4	28,4	100,0
	Total	190	100,0	100,0	

Table 9: Distribution of frequencies within clusters

3.8 Differences of the clusters

As can be seen in table 50, the clusters differ from each other in several aspects:

Characteristics	Cluster 1	Cluster 2	Cluster 3	Cluster 4
Image of brand	High	Low	High	-
Quality	-	-	-	-
Manufacturing processes	Low	-	High	-
Country of origin	-	-	-	-
Good environmental foot-print	Low	-	-	-
History of a luxury brand	-	Low	Low	High
Brand's corporate social re-sponsibility			High	Low
Social sustainability	Low	High	High	Low
Higher quality	-	-	-	-
Longevity	Low	High	High	High
Increase in value	Low		High	High
Sustainability as an integral	Low		High	High

Table 10: Characteristics of the clusters

Furthermore, the clusters were checked for age-specific differences. This showed at $\chi^2[15] = 28.725$; $p = .017$ a statistically significant result. The effect was at $\phi = .389$ of middle effect size. A close look at the differences between the clusters showed that only the second cluster differed significantly from the other clusters. The age group of 25 to 34-year-old test subjects was less frequently represented in cluster 2 than in the other clusters.

A possible gender-specific difference between the clusters was also examined. There was a statistically significant difference in $\chi^2[6] = 13.264$; $p = .039$. The effect was at $\phi = .264$ of small effect size. The difference only related to the proportion of women in the third cluster. Women were more frequently represented in the third cluster than in the other clusters.

However, there was no significant difference between the clusters depending on how often luxury products are bought. There was also no difference in the preferred way of shopping for luxury products (online/offline).

As can be seen in Table 10, the clusters differ from one another in several aspects. Cluster 1 can be described as a consumer group that cares less about sustainability than the other clusters. A possible increase in value of the luxury product or longevity or higher quality are not as important to this consumer group. The consumer group of the first cluster is mainly interested in the image of the luxury brand. This consumer group could therefore be referred to as an image-oriented consumer group. The image-oriented consumer group did not differ from the other three clusters in terms of gender, age, frequency or type (online/offline) of shopping behavior.

Luxury products are particularly important for the consumer group in the second cluster for reasons of sustainability and longevity. The consumer group of the second cluster included significantly fewer people aged between 24 and 34 years. Here, too, there were no gender-specific differences. The consumer group of the second cluster could be described as a consumer group that experiences sustainability in the context of luxury products mainly through the component of the longevity of luxury products.

The consumer group in the third cluster is particularly interested in the sustainability of luxury products. At the same time, however, the brand image of the luxury brand is of great importance. The consumer group of the third cluster included a particularly large number of female consumers. However, there were no age-specific differences. The consumer group in the third cluster could also be referred to as a brand-conscious consumer group interested in sustainability.

In addition to sustainability and longevity, the consumer group in the fourth cluster also attaches importance to the increase in value of the luxury products they purchase. The consumers in the fourth cluster did not show any differences in terms of shopping behavior, age or gender distribution compared to the other clusters. The consumer group in the fourth cluster can best be described as a consumer group interested in value enhancement and sustainability.

CHAPTER 4

CONCLUSION

4   Conclusion

Sustainability is taking on an increasingly important role in our Western society. This assumption has been confirmed both in the literature and in the two studies conducted in the context of this thesis. For the luxury industry, the question arises to what extent this social change is also reflected in consumer behaviour. The basic assumption that the luxury industry is also affected by the social paradigm shift could not be sufficiently clarified based on the literature research. Accordingly, the research gap and resulting relevance of this work is proven. The qualitative survey developed in consideration of the literature and based on guideline-based expert interviews with executives from the luxury industry showed that the topic of sustainability is now present among participants. Accordingly, it can be assumed that the megatrend of sustainability has reached the luxury industry. From this insight, the question of the relevance and the aspects of sustainability for the industry as well as the customers has been derived. For this purpose, the not consistently uniformly defined term of sustainability has been divided into three sub-areas: Environmental Sustainability, Social Sustainability and Economic Sustainability. The participants were asked individually about each of these sub-areas. This approach has shown that companies in the luxury industry are increasingly addressing sustainability in terms of their products and philosophy, but with a focus on environmental sustainability. Social sustainability is a raising factor especially regarding corporate social responsibility reports and their public promotion. In terms of marketing and customer communication, sustainability plays only a subordinate role for luxury companies and is not directly associated with the purchase decision of customers.

The measures implemented are currently hardly communicated and are not comprehensible for customers except CSR reports. This approach of the luxury industry is diametrically opposed to the megatrend of sustainability discussed in the literature. Consequently, hypotheses have been developed, derived from the given statements and designed to capture the attitudes of luxury consumers towards sustainability and to investigate the relevance for their purchase decisions. In due course, no matching primary data for a specific investigation could be found and an independent quantitative study was initiated and conducted. Questions on purchasing behaviour, particularly regarding the ubiquitous topic of sustainability, like other surveys on critical topics, repeatedly encounter the problem of socially conforming response behaviour. Even in anonymous surveys, respondents give answers that they perceive as conforming to social expectations. The developed survey is based on four hypotheses, which have been investigated with the help of interrelated question blocks. The hypothesis that the luxury industry is influenced by sustainability and that sustainability is a relevant attribute of luxury products and thus has an influence on the purchase decision of the consumers significant agreement from the consumers. However, in the detailed analysis of the relevant components of sustainability, serious differences were found between statements. A significant influence of ecological sustainability factors on the purchase behaviour was not confirmed by the consumers. In detail it became clear that the consumers do not explicitly inform themselves about the production of the products before their purchase. Combined with the previous statement it can be deduced that consumers in principle attach importance to sustainability but do not actively deal with the actual sustainability parameters before purchasing luxury products.

This behaviour has been partly anticipated by the industry, where the marketing of sustainable production is not directly used to influence purchase decisions. From the industry side, social sustainability in form of CSR reports have been highlighted as relevant for the consumer. In this case, the consumer survey contradicted the industry's assumption. The rejection is even more pronounced when considering the response times and extraction of implicit attitudes. The offerings highlighted by the industry as particularly crucial, such as corporate social responsibility reports, are not accepted by customers. In contrast to the previous attitudes, economic sustainability and the value of conservation equated with it have a significant influence on the purchasing behaviour of customers. On the part of the industry, this factor has been assigned the lowest relevance. For the customers, however, the quality and value relevant factors are the most decisive. From the two studies and the subsequent evaluations, it can be concluded that sustainability also plays an important role in luxury, although the individual factors are weighted differently. It can be concluded that sustainability is considered a generally given prerequisite for luxury products due to its relevance for customers. Thus, the individual parameters for the product individual purchase decision move into the background. For the industry, several recommendations for action can be derived from this finding.

1. Sustainability does not serve as a primary element in customer acquisition for luxury products.
2. Luxury customers expect a minimum level of sustainability from luxury products without this contributing decidedly to their purchasing behaviour.

3. If a company in the luxury industry does not meet the minimum sustainability requirements, this can have a significant negative effect on customers.

Furthermore, the cluster analysis allowed a segmentation into consumer behaviour related groups. For the companies, this poses the challenge of addressing the respective customer target group adequately and emphasizing the purchasing arguments accordingly. For companies in the luxury industry, this realization creates a compulsion to comply with and follow up on sustainability-promoting measures even if they are not directly related to greater sales. Customers take sustainability for granted at luxury companies without actively considering the individual parameters before making a purchase. If sustainability is not observed, great damage can be done to the reputation of companies, while only minor sales promotion can be expected from active promotion of measures. Accordingly, sustainability is an indispensable factor for luxury brands and must be integrated into the philosophy and corporate management. The described beginning of a transformation and change of paradigm also shows a central limitation of this study. Society is undergoing continuous change, and global interconnections are leading to ever more rapid change. Accordingly, the half-life of statements regarding consumer behaviour is short. However, this also indicates the potential for further research. With the appropriate resources, the work presented here can serve as a starting point for a long-term consumer panel study. In addition to the current attitudes of consumers, the influence of sustainability on the consumer behaviour of luxury consumers can be investigated in the long term and the methodologies used can be further developed. Finally, the global relevance of sustainability in terms of future generations and the development of our society must be emphasized.

5   New Scientific Results

The main new scientific findings can be described as follows and are organized according to the structure of the work.

1. The decision-makers in luxury companies assume a significant influence of sustainability on the purchasing behaviour of consumers. However, it has been found that the positive influence of sustainable products on consumer purchasing decisions is rather low.

2. Sustainability as a central communication element for luxury products is therefore rather unsuitable and other characteristics should be placed in the foreground. Social sustainability and ecological sustainability are significantly less important for consumers than economic sustainability. In this context, a paradox arises regarding the fundamental maximization of profits. Investments in sustainable social and ecological factors in luxury products have only a minor effect on sales and the resulting profit maximization. Nevertheless, the overall attitude of consumers towards sustainability and its relevance for luxury products is strongly positive. It can be deduced from this that consumers have a fundamentally high expectation of the sustainability of luxury products and do not consider it for individual purchases. Accordingly, failure to meet expectations can lead to a slump in sales, but meeting the factors does not have a positive impact on sales. Sustainability must therefore be seen as a fundamental component that is a necessity and not an optional determinate.

3. Luxury consumers can be clustered into clusters with distinguishable behavioural patterns and deductible purchase patterns. Luxury

brands can integrate this knowledge in their marketing and sales planning and refine their consumer approach.

Attachment A: Professional CV

Arno Friedrich Böhnert was born on the 6th of May 1991 in Hamburg, Germany. He earned his dual bachelor's degree in business administration from Corporate State University Baden-Wuerttemberg in 2015, in conjunction with a 3-year apprenticeship at MOBOTIX AG in Kaiserslautern. After graduation, he took the position of executive assistant to the CSO at Mobotix AG. After one year he continued his academic career at Munich Business School and successfully graduated with a Master of International Business. He continued his studies at Florida International University in Miami and graduated with a Master of Business Administration in 2017. He afterwards joined Robbe & Berking in Flensburg as Export Manager for the regions Middle East & Africa. After six month he got promoted to Sales Director Middle East, Africa & Asia Pacific. In 2018, he started his part-time PhD at MATE University, Kaposvar Campus, where he primarily focused his research on the luxury industry which has also been the focus of his professional carrier, which he continued as Chief Sales Officer at M Yachts AG, a worldwide operating superyacht management, brokerage and charter company. His doctoral dissertation is titled "The Impact of Sustainability on Luxury Consumption Behaviour – Analysis within the German luxury goods industry". From 2020 to 2022, Arno Böhnert was a lecturer for marketing and sales at Hochschule für Technik und Wirtschaft Berlin. Since a young age he also pursued his carrier as a professional offshore sailor which he is still continuing today, being involved in world-wide regattas.

Attachment B: Publications and Work in the field of Research

In English

Peer Reviewed Journals

1. Biewendt, M., Blaschke, F., Böhnert, A. (2020). The Rebound Effect – A Systematic Review of the Current State of Affairs. European Journal Of Economics And Business Studies, 6(1), 106-120. doi: 10.26417/ejes.v6i1.p106-120.16

2. Biewendt, M., Blaschke, F., Böhnert, A. (2020). An Evaluation Of Corporate Sustainability In Context Of The Jevons Paradox. SocioEconomic Challenges, 4(3), 46-65. doi: 10.21272/sec.4(3).46-65.2020.17

3. Blaschke, F., Biewendt, M., Böhnert, A. (2020). The Repercussions of the Digital Twin in the Automotive Industry on the New Marketing Logic. European Journal of Marketing and Economics, 4(1), 68–73. doi: 10.26417/229eim64f.

4. Biewendt, M., Blaschke, F., Böhnert, A. (2021). A Review of Contemporary Challenges in Business Culture. International Journal of Applied Research in Business and Management, 2(1), doi: 10.51137/ijarbm.2021.2.1.1.

5. Biewendt, M., Blaschke, F., Böhnert, A. (2021). Motivational Factors in Organisational Change. SocioEconomic Challenges, 5(3), 15-27, doi: 10.21272/sec.5(3).15-27.2021M.

6. Böhnert, A., Blaschke, F., Biewendt,M. (2022). Impact of Sustainability on the StrategicDirection of Luxury Companies. European Journal of Marketing and Economics. 8(1).59-73. ISSN: 2601-8659.18

7. Böhnert, A. (2023). Influence of sustainability on the purchasing behaviour of luxury customers - A consumer survey and trend analysis. European Journal of Marketing and Economics- under review

PRESENTATIONS

1. <u>Boehnert, A.F.</u>: Speaker at the Robbe & Berking Luxury Interior Designer Seminar, Flensburg, 4.11.-6.11.2018

2. <u>Boehnert A. F., Biewendt, M., Blaschke, F.</u>: Corporate Sustainability: An Evaluation of Corporate Sustainability in the Context of the Jevons Paradox, Kaposvár University Conference, Kaposvár, 15.5.2019

3. <u>Boehnert, A.F.</u>: Luxury Business Dialog – Selling luxury – Dive into the philosophy and world of Robbe & Berking, Munich Business School, Munich, 22.10.2019

4. <u>Boehnert, A.F.</u>: Luxury Business Workshop – Intercultural luxury sales strategy for master students LUX750, Munich Business School, Munich, 22.10.2019

5. <u>Boehnert A. F., Biewendt, M., Blaschke, F.</u>: The Rebound Effect: A systematic review on the current state of affairs, Kaposvár University Conference, Kaposvár, 14.11.2019

6. <u>Boehnert A. F., Biewendt, M., Blaschke, F.</u>: Jevon's Paradox and Rebound Effect, Kaposvár University Research Seminar, Kaposvár, 20.2.2020

TEACHING

1. 2019: Munich Busines School, Luxury Studies and Luxury Dialog, Guest Speaker, Munich, Germany

2. 2020: Kaposvár University, Guest Speaker at Marketing classes, Kaposvár, Hungary

3. 2021: Hochsschule für Wirtschaft und Technik Berlin, Lecturer Berlin, Germany
   a. VMD 1 Modehandel/ Modemarketing (PS)
   b. M2 Masterseminar
   c. B4_20 Fashionmanagement und Marketing (SL)
   d. B7_31 Abschlusskolloquium inklusive Bachelorseminar (PS)

4. 2022: Hochsschule für Wirtschaft und Technik Berlin, Lecturer Berlin, Germany
   a. VMD 1 Modehandel/ Modemarketing (PS)