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**Assessing fans' requirements and consumer behaviour
towards sustainability in sports merchandising**

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Abstract

This master's thesis addresses the topic of sustainability in football merchandising and the growing need for innovative and sustainable strategies. The conducted survey shows that emotional connection to a club has a strong effect on purchase intention. This study contributes to a better understanding of merchandise consumer behaviour in the context of sustainability labels and offers practical implications for football clubs.

Key terms: Sport Management, Sustainability, Merchandise, Football, Intention to Purchase, Willingness to Pay, Sustainability Labels.

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FCA	-	1. FC Augsburg
HDH	-	1. FC Heidenheim
KOE	-	1. FC Köln
M05	-	1. FC Mainz 05
FCU	-	1. FC Union Berlin
B04	-	Bayer 04 Leverkusen
FCB	-	FC Bayern Munich
BVB	-	Borussia Dortmund
BMG	-	Borussia Mönchengladbach
DFL	-	Deutsche Fußball Liga
BSC	-	Hertha BSC Berlin
RBL	-	RB Leipzig
SCF	-	SC Freiburg
SGE	-	Sportgemeinschaft Eintracht Frankfurt
D98	-	SV Darmstadt 98
TSG	-	TSG 1899 Hoffenheim
VfB	-	VfB Stuttgart
BOC	-	VfL Bochum
WOB	-	VfL Wolfsburg
SVW	-	SV Werder Bremen
<i>ITP</i>	-	<i>Intention to purchase</i>
<i>IL</i>	-	<i>Internal Legitimacy</i>
<i>SA</i>	-	<i>Sustainability Attitude</i>
<i>WTP</i>	-	<i>Willingness to pay</i>
<i>SCR</i>	-	<i>Sustainability criteria rating</i>
<i>PLR</i>	-	<i>Perceived label relevance</i>

1. Introduction

Football is one of the most popular sports in the world. Throughout centuries, it has provided immense joy and motivation for people around the world. For many it is not only a source of entertainment, but it can also lead to inspiration and change the life of each individual follower. Sports clubs are in the spotlight of society and therefore have a responsibility to the population. Nonetheless, the large fanbase is not only influenced by football, but in turn also affects the clubs themselves and shapes the world of football to a certain extent too. Therefore, with the growing interest of fans in the environment and sustainability, it is no surprise that many clubs start to engage in more sustainable practices.

In today's modern environment, the beloved sport can assist in protecting the planet by acting as a carrier for encouraging sustainable practices and spreading knowledge about environmental topics. Football has a unique role to play in helping create a more environmentally responsible world. Due to external pressures by governments and society and the rising awareness among fans, football clubs make increasing efforts to implement more sustainable measures, e.g., in merchandising. This research explores the interest of fans in sustainable merchandise as well as their purchasing behaviour. This includes the expectations of consumers regarding certifications and seals for fan articles, as well as the monetary implementation from the perspective of the German football club Bayer 04 Leverkusen (B04). B04 is one of the most successful clubs in the German Bundesliga today and active in international competitions. To meet the growing demand for more sustainability, the club is currently endeavouring to increase sustainability in its merchandising and is therefore planning to introduce its own sustainability label. Hence, this study examines this topic on the basis of fans' requirements. As the majority of the data was collected among football clubs of the First German Bundesliga, the data and insights gained relate to the First Bundesliga for the most part.

2. Situation Analysis

2.1 Football Merchandise Market

2.1.1 Bundesliga

The Bundesliga is the highest German league in football. It is divided into the First and Second Bundesliga, with 18 teams participating in each (transfermarkt.de 2023). Founded over 50 years ago, in 1963, the German Bundesliga is the youngest of the European “big five” leagues, also including the English Premier League, Spanish La Liga, Italian Serie A and French Ligue 1. The German football management system is highly regarded for its emphasis on developing young players and effectively managing club finances and sponsor relations. A primary aspect of this system is the German Football League Association (Deutsche Fußball Liga; DFL), which manages the Bundesliga and distributes its revenue fairly among the 36 clubs. Bundesliga clubs, in comparison to the other major leagues in Europe, more strongly prioritize the satisfaction and affordability of their fan base, with an average attendance of over 40,000 fans per game. This is largely due to their approach of limiting season tickets and offering affordable ticket prices, ensuring that all fans have the opportunity to attend matches (Palchykau and Matvienka 2014). Unlike other major European leagues, the gap between the highest and lowest earning club does not exceed €130 million. Ultimately, financial resources are the key to sporting success, and merchandise plays a significant role in this.

Bain & Company summarizes the most important value levers for sporting success under the foundation of customer value management, sponsoring, stadium & ticketing and merchandising. On top of these, brand positioning and fan mobilization are important factors. The interplay of these components generates the necessary resources to finance sporting success. The more effectively a club uses these components to manage its business, the more likely it is to achieve sporting success in the medium to long term. The study also underlines

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the importance of recognizing new trends at an early stage, as the market is still far from reaching its potential (Sinn, et al. 2022).

All current First Bundesliga clubs account for a total accumulated revenue of €3.459 billion in the last financial year (balance sheet date varies from 30.06.22 and 31.12.22). However, only eight out of 18 clubs have a positive after-tax result. Among other things, this is due to the high personnel costs of €1.817 billion across the league, these include player salary. At last, all clubs in the Bundesliga reported total equity of €1.63 billion and total assets of €3.625 billion in fiscal year 2022 (DFL 2023a).

Total merchandising sales in the Bundesliga amounted to €174 million last season. Figure 1 illustrates the development of merchandise sales over the last nine seasons, showing that they have not increased over the last decade. On the contrary, sales reached a low point in the season 2021/22 (Zeppenfeld 2023a).

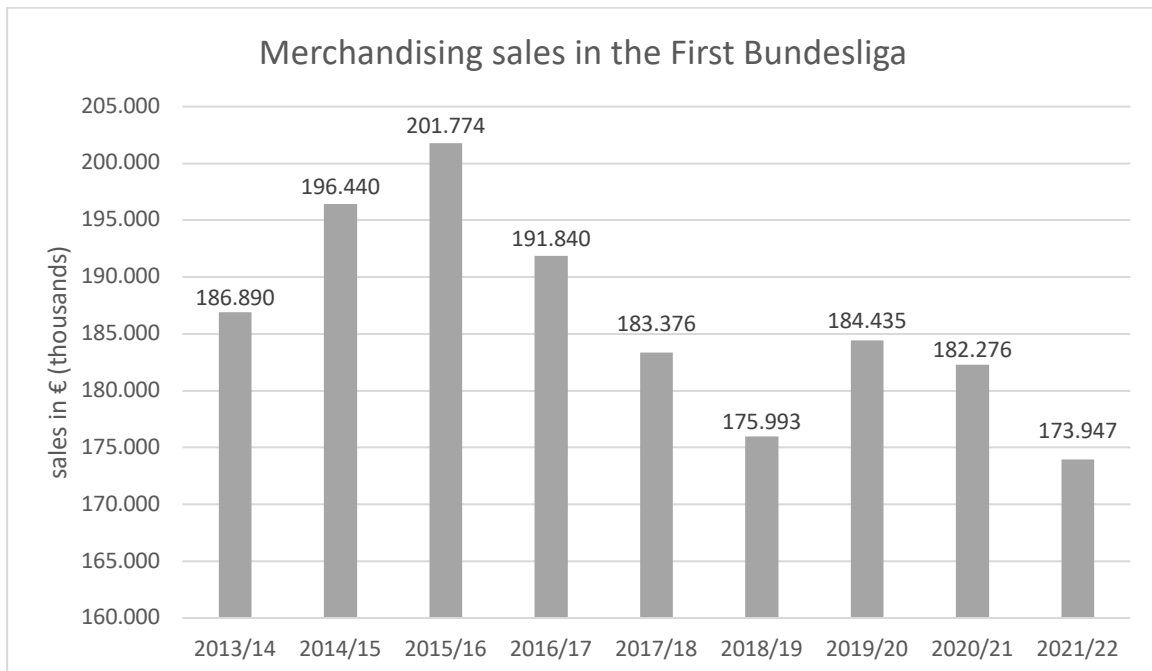


Figure 1: Merchandising sales in the First Bundesliga. Own illustration (Zeppenfeld 2023a)

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According to the DFL, merchandise accounted for 4.82% of the companies' total revenue this year. This puts merchandising in fourth place among the strongest revenue drivers, behind media exploitation (38.25%), advertising (25.75%) and transfer revenue (12.73%) (DFL 2023b).

In recent years, Bundesliga clubs have recorded a decline in merchandising sales and show lower sales growth compared to other top European leagues. The reasons for this are market saturation on the one hand and on the other hand, the fact that the two biggest clubs, FC Bayern Munich (FCB) and Borussia Dortmund (BVB), are no longer as successful internationally, when considering an international uptrend after they faced each other in the Champions League Final in 2013. In addition, the needs of consumers were not sufficiently taken into account and there was a lack of innovative ideas, such as digital fan merchandise. The Bundesliga is at a disadvantage compared to other leagues internationally, as too little consideration is given to fast-moving consumers who expect changing product ranges. This is confirmed by Joachim Hilke, Managing Director of Fanatics, an American fan merchandise manufacturer that is responsible for Germany, Austria and Switzerland. The expert blames the decline on the marketing strategies of German clubs. Clubs abroad are more open to the further development of their merchandising products, which is also reflected in declining sales in Germany. One example of the positive success of sales figures is the sharp rise in merchandising sales at Juventus Turin following the signing of Cristiano Ronaldo. This also illustrates the connection between merchandising sales figures and sporting decisions (Ashelm 2019).

To increase merchandising sales again in the future, Bundesliga clubs should focus on new markets and target groups and introduce new innovative types of fan merchandise. Even though, club jerseys are currently the biggest revenue driver in merchandising, the Bundesliga has seen the lowest increase in jersey sales compared to other top leagues. In addition, jersey prices have

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risen by 23% in the last ten years, leading to an average price of a First Bundesliga jersey of €81.90, most expensive jersey from FCB (Adidas), Sportgemeinschaft Eintracht Frankfurt (SGE), RB Leipzig (RBL) and Hertha BSC (BSC) (Nike) for €89.95, cheapest jersey from SC Paderborn (Saller) for €69.95, in season 2019/20 (Ashelm 2019).

At last, on the one hand, the general decline in consumption due to the COVID-19 pandemic and the current high inflation demonstrate the current missing demand by fans. On the other hand, they also put the decline in sales figures into perspective compared to other consumer goods (Ha, Kose and Ohnsorge 2021). Overall, it is important that Bundesliga clubs focus more on customer wishes and trends in the future to increase merchandising sales again.

2.1.2 Bayer 04 Leverkusen

Bayer AG, founded over 150 years ago, is a life-science company with core competences in the fields of medicine and agribusiness (Bayer 04 Leverkusen Fußball GmbH 2023a). Bayer AG is the sole shareholder of the football club, which is due to an exemption from the 50+1 rule. This set of rules of the DFL usually implies that a capital company must be majority owned by the parent club to obtain a license to participate in the Bundesliga, which means that the parent club must hold at least 50% of the voting rights plus at least one additional voting right in the meeting of shareholders of the capital company (DFL 2023c). The exemption was only possible because Bayer 04 Leverkusen Fußball GmbH was founded on April 1, 1999, and until then had received insignificant funding from Bayer AG. The club was first founded on July 1, 1904, under a different name (Bayer 04 Leverkusen Fußball GmbH 2023b).

Professional football in Germany reaches a lot of people and enjoys great popularity. A survey of the population in Germany in 2022 showed that about 5% of the respondents in Germany are fans of the B04 club. In addition, the club currently has around 30,000 members and thus ranks twelfth among the clubs with the largest number of members (Zeppenfeld 2023b). Most

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recently, B04 recorded equity of €200.5 million and total assets of €375 million. The club generated sales of €273.6 million in fiscal year 2022. After deducting personnel costs of €142.3 million, and descriptions, expenses and taxes of €138.8 million, it generated a loss of €-7.347 million (DFL 2023a). However, the parent company Bayer AG ensures that the equity level stays constant at round about €200 million via a profit transfer agreement with the club at the end of each fiscal year (Zeppenfeld 2023c). The main sources of income are, on the one hand, about €79 million in broadcasting sales. On the other hand, the club earns about €8 million per year by the current jersey sponsor Barmenia in addition to many other sponsors (Zeppenfeld 2023d).

Merchandising is also a significant source of revenue that can finance sporting success, as previously categorised by Sinn et al. (Sinn, et al. 2022)(2022). It is difficult to quantify the market for B04, as specific sales figures are not publicly available. In addition, no precise sales figures were granted by B04 for this study. Based on the published data provided, merchandising sales can be estimated at approximately €13 million (4.82% of €273.6 million). This figure is derived from the total revenue of 2022 and the DFL's published percentage figure for the share of merchandising in the total revenue of First Bundesliga clubs (DFL 2023b).

Bain & Company provides one of the few well-founded key figures on merchandise for B04. The company's study examined the merchandising sales per fan of all Bundesliga clubs. According to the study, B04 came third on this list with €10.59 in sales per fan (Sinn, et al. 2022). This leads to the assumption that B04's merchandising revenue exceeds the estimated €13 million. Consequently, there are two approaches to further expand the market for B04. Firstly, new fans who buy merchandise can be attracted, and secondly, existing fans can be encouraged to buy more products.

2.2 Sustainability in Sports Merchandise

2.2.1 Sustainability in Football

Sustainability is one of the most pressing challenges in maintaining the prevailing living conditions globally, but it also presents an opportunity for companies to take the lead and gain new or retain current customers in the long run. This is particularly true for the sports industry, including football associations, leagues and teams, many of which have already introduced regulations and guidelines for their daily work. In the report "The Red Way" by English football club Liverpool FC, it is emphasized that merchandising plays a crucial role in the journey towards sustainability. As stated in the report, merchandising accounts for over 70% of Co2 emissions, which have only increased during the corona season (Liverpool FC 2021).

The world of sport and the natural environment are inextricably linked; the latter is essential for humans to survive as well as enjoy playing and watching sport. Still, our practices and patterns of consumption have caused significant damage to the relationship between these two entities. Climate change is at the forefront of public discourse, creating the realization that our behaviour needs to adjust to help preserve the planet. However, implementing changes can be a difficult process, with it being hard for us to comprehend the effects of our day-to-day decisions (McCullough and Kellison 2018).

The growing awareness of environmental responsibility has spurred major football clubs in Europe to take action in minimising their environmental impact while also enhancing their social responsibility. To this end, several collaborative efforts with environmental organisations, sustainability projects, and introduction of eco-friendly regulations have been initiated (Liverpool FC 2021; UNFCCC 2020). Additionally, FIFA has devoted considerable attention to the notion of sustainability, devising a range of programs and initiatives intended to encourage sustainability in football (FIFA 2023).

2.2.2 Bundesliga

As previously described, the Bundesliga is extraordinarily focused on its fans compared to other leagues. Accordingly, as fans (especially Gen Z) increasingly demand more sustainable practices, a positive trend is also developing in terms of sustainability (UNiDAYS 2022). Yet, this also derives from external pressures on football clubs by society, governments, or leagues. At the same time, this is an indicator for increased demand by society for sustainable merchandise. The DFL followed up on this by incorporating sustainability guidelines into its licensing regulations in May 2022. This includes measures to support clubs in implementing and networking in the area of sustainability, such as guidelines and templates for standardized analyses that support the implementation of specific criteria (DFL 2022).

In April 2022, the German Federal Ministry for Economic Cooperation and Development (BMZ) and Brands Fashion launched the "From Field Work to Fan Shop" initiative. The aim is to promote the sustainable cultivation of cotton and support producers in the western Indian region of Gujarat. Nine clubs of the First and Second Bundesliga (1. FC Union Berlin (FCU), Arminia Bielefeld, SGE, Hamburger SV, SV Werder Bremen (SVW), VfB Stuttgart (VfB), VfL Wolfsburg (WOB), BVB and FC St. Pauli) have already joined the initiative (INA 2022). In addition, 450 small farmers will be supported in switching to organic farming and 1,000 children and young people from the region will be encouraged through sporting activities. Showcasing the increased relevance of such topics among the associations, a delegation visited the cotton fields in January 2023 and took part in a sports and youth festival to learn more about the initiative. The first fan merchandise made from organically grown cotton from the region was initially planned to be available in fan stores in summer 2023 under the collection name "cotton-in-conversion" (Sport for Development 2023). It remains to be seen when the first products can be realised.

2.2.3 Bayer 04 Leverkusen

B04 is aware of the enormous social significance of football and the responsibility it brings to professional clubs. They themselves want to contribute to positive changes regionally and globally in times of sustainability transformation. Driven by the social influence of football, the aim is to be an attractive employer in terms of social commitment and to use innovation to make new economic challenges more sustainable.

The club defines its goals in three areas: Environment, Society and Club Governance. Within these areas, B04 is already very active, particularly at the social and community level, leaving space for more environmental engagement. They add value to society through numerous projects and initiatives. To name a few examples: On the "Bayer 04 Hilft-Tag" (Bayer 04 helps day) the club joins forces together with coaches and players as well as the city of Leverkusen to enhance a public institution in the city in many ways. This action was initiated in 2015 and has been held annually since then. Furthermore, since 2010, mentally impaired young people have been given the opportunity to pursue their favourite hobby, football, at what are now more than 20 locations throughout Germany. They are accompanied by a team of coaches from the club and the program is specially adapted to young people. In addition to these valuable initiatives and many fundraising activities, the club offers many other opportunities for children, young people, and even older or sick fans at levels of education, closeness to the team and community events.

For several years, the club has been optimizing the resources needed to become more energy efficient and sustainable. Over the last 6 years, the relative reduction in total energy consumption has been in excess of 30%. Facilities are constantly being optimized to operate in a more resource efficient manner. These include water, electricity, gas, and district heating. In addition, the association reinforces the topics of mobility, nutrition, waste, and the CO2 footprint. The latter is one of the most current targets for more sustainable action. The club

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website explicitly mentions the pursuit of goals in the areas of fan mobility, catering and merchandising (Bayer 04 Leverkusen Fußball GmbH 2023c).

Accordingly, the current status of the merchandising department is difficult to assess by the public. There already have been some measures in the past, e.g. changing the annual jersey release to two years, which however have been abolished again due to leaking profitability. This example illustrates the conflict between sustainable measures and achieving economic goals. Nevertheless, the latter activities and the association with external consultants show the willpower to make fan merchandise more sustainable.

For 2022, B04 reported to the DFL on sustainability measures in merchandising products. According to the report, items with an environmental label account for 26.1% of total merchandising sales, while items with a fair production label have a share of 20.2%. In terms of production, 13.8% of merchandising items are manufactured in Europe (EU and Schengen area). This year, the outfitter was changed from Jako to Castore at the start of the 2022/23 season. The sustainability measures have tended to take a step backwards with the change of supplier, which resulted from discussions with B04. The club would therefore like to make items produced in-house more sustainable and is working on an eco-label that meets the wishes and requirements of the fans, which shapes the scope of this collaborative study (Bayer 04 Leverkusen Fußball GmbH 2023d).

For the current year (1.1.2023 - 05.12.2023), there are no published figures for sustainability in the merchandising area, but the share of sales accounted for by Castore items compared to items produced in-house can be put at 85.88%. In addition, jerseys continue to make up the largest share of the textile range at 67.42% (Bayer 04 Leverkusen Fußball GmbH 2023d). The high proportion of jerseys may be due to the current sporting success, as Bayer 04 Leverkusen is currently leading the First Bundesliga table (first half of the 2023 season), but just 14.12% of

current sales are made up of items produced in-house that are eligible for a self-developed eco-label. Direct changes seem to be difficult to implement due to contract barriers. The current outfitter Castore has a contract with the club until 30th June, 2027 (Bayer 04 Leverkusen Fußball GmbH 2022). Subsequently, changes are most likely latest to be created with a new contract. Therefore, potentials for fan articles of own production are sought first. These are to be implemented in the near future. The research is designed to help B04 identify opportunities and prioritise changes that can be implemented internally, without the need for external decision-makers, and therefore focuses on products directly sourced by the club. The aim is to win new fans through a sustainable approach and to continue to inspire existing fans with B04 merchandise.

2.3 Relevance of Sustainability

Numerous influences, such as environmental, economic, governmental, and corporate, serve as drivers to motivate the transition towards sustainability. This shift requires a comprehensive and well-considered approach to ensure that the long-term benefits of sustainability are realised.

The current state of global climate affairs has encouraged an increase in corporate sustainability initiatives. Consumers' demands for greater environmental protection has urged companies to reduce their carbon footprint and comply with emission standards. A governmental intervention involves the adoption of regulations designed to save the environment and promote social accountability. Furthermore, sustainability initiatives may ultimately provide a commercial benefit by allowing organizations to stay competitive and capitalize upon cost savings in the long term. Therefore, by keeping up with emerging trends and adapting their methods to become more ecologically efficient, organizations are positioned to obtain long-term economic benefits. However, to obtain this advantage, a long and strict compliance with the restructuring process is required (Wijethilake and Upadhaya 2020).

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To remain competitive and meet environmental sustainability objectives, businesses must prioritize the reduction of their carbon emissions and energy consumption. This includes investing in renewable energy sources, applying energy efficient technologies, and promoting a circular economy to reduce potential waste. Additionally, organizations should strive to ensure their supply chains are sustainable and prioritize utilizing sustainable production processes and sourcing materials and products from environmentally minded sources. Lastly, the engagement of stakeholders in the dialogue and decision-making processes related to sustainability initiatives can effectively help to meet their expectations and requirements. It is crucial to hold conversations with stakeholders at every step of the process to guarantee that sustainability objectives adequately reflect the needs of all involved parties (Yadav, et al. 2018).

By pursuing sustainability goals, organizations may gain numerous advantages. Consumers are increasingly becoming aware of the social and environmental implications in their consumer behaviour. Especially, as the purchasing power of Gen-Z, who are highly interested in sustainability, increases as time goes on (UNiDAYS 2022). Companies that promote sustainability have the potential to grow trust and loyalty amongst their customers. Additionally, this may also lead to a more favourable image, as customers are significantly motivated to associate with companies that are actively investing in sustainability, which most likely positively influences the sales and customer satisfaction (Niță and Ștefea 2014).

Insight into the business operations of a company can demonstrably change the perception and individual assessment of the company. If the perception is positive, this can also have a positive impact on consumer behaviour. It can also be applied to aspects of sustainability. Businesses that are transparent and actively engaged in mitigating their environmental footprint are likely to gain the approval and endorsement of their customers (Buell, Shwetha and Yanchong 2019).

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However, the switch to a more sustainable production of merchandise also brings several challenges. On the one hand, materials that are often used due to their low prices need to be replaced by more environmentally friendly alternatives, which can be associated with higher costs. On the other hand, improving working conditions and implementing new supply chains also requires investment in the form of training, acquiring new machines, adapt processes and introducing standards and control mechanisms. However, these initial investment costs can be amortized in the long term through various efficiency measures. By avoiding waste, reducing delivery routes or schedules, and cooperating with local trading partners, a return on investment can be achieved. In addition, a more efficient and transparent supply chain can minimize risks such as supply disruptions or loss of reputation, which can further increase customer satisfaction and retain customers in the long term (Nayak, et al. 2019).

Overall, switching to a more sustainable production of merchandise is therefore not only necessary from an ecological perspective, but also offers economic benefits for the company. It contributes to a long-term stable and sustainable business strategy that meets both the needs of consumers and the requirements of responsible corporate governance. It is therefore important that companies are aware of the implied costs and make the necessary investments to pursue a holistic and long-term approach to sustainable merchandise production (Nayak, et al. 2019).

Many of these sustainability trends are included by companies in sustainability labels for product identification. The company is free to decide whether to be certified by an organization and apply this label, or to design its own label that is tailored to customer requirements. B04 is currently planning the latter, indicating a need for research on customer requirements in the context of a club-internal sustainability label. In the following the fundamentals of an eco-label are explained in more detail.

2.4 Sustainability Labels

As global sustainability is becoming increasingly important in the sports merchandise industry, sustainability labels have become more and more relevant. Sustainability labels indicate how eco-friendly a product is produced and how it impacts the environment (UBQ 2021). Yet, the question is not only how to ensure that your merchandise products are sustainably produced but also how to communicate this to the fans.

One possible method is to communicate it with banners through the online and offline fan shops. The VfB, for example, practices this method (appendix 1). A green banner with the word "sustainability" is displayed in the left corner of the club for the promotion of sustainable produce products, while also mentioning it in the product description (VfB Stuttgart 2023).

Several other Bundesliga clubs display eco-labels next to their products in their online stores as well. In the textile industry, there are currently 104 different textile labels. Three of the most used labels in the sport industry are Bluesign, OEKO-TEX, and GOTS (fairlyfab 2021). Table 1 shows an overview of exemplary labels and their attribute and merchandise partners.

Eco Label	Attributes	Merchandise
Bluesign	Social responsibility, CO2/ water emission, chemicals, resource efficiency, supply chain,	Puma, Adidas, Nike
OEKO-TEX	Prohibited substances, chemicals, labour conditions	Puma, Hummel, JAKO
GOTS	Organic fibres, Social Standards (working conditions), Environmental (chemicals, water waste, colouring)	-
Grüner Knopf	Environmental (chemicals, water waste, colouring, CO2,), Social Standards (working conditions, discrimination, minimal wage)	-
IVN Best	Chemicals, organic fibres, Social Standards (working conditions), colouring	-

Table 1: Overview Eco-Labels. Own creation

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The IVN Best label is the most stringent label currently available on the market by regulating not only the production process, but also the raw materials that are permitted to be used.

In accordance with the Global Organic Textile Standard (GOTS), at least 70 percent of the fabric must be made from natural fibres of controlled organic origin. Next to meeting the social standards of the International Labour Organization (ILO), the entire textile value chain is regulated from the point of cultivation to the point of sale as part of GOTS (Greenpeace 2018).

Bluesign is used by the majority of companies in the sport industry, including Nike and Adidas. Among the partner companies are not only retailers and sports companies, but also suppliers. The labels' objective is to eliminate all harmful substances from the manufacturing and supply chain and make the products 100% sustainable by controlling the input factors (Bluesign technologies, Bluesign Home 2023). As a prerequisite for receiving the Bluesign label, the company must meet certain requirements (Bluesign criteria), namely: Chemical Consumption, Carbon Emission, Water Consumption, Energy Consumption, Worker Health & Safety.

The OEKO-TEX label was created by several independent textile and leather testing institutes in Europe and Japan. As a result of their collaboration, several test methods have been developed for the evaluation of sustainable products and the determination of limits for several values, such as harmful substances. There are currently seven different OEKO-TEX labels available on the market. For example, the OEKO-TEX® STANDARD 100 and OEKO-TEX® LEATHER STANDARD labels guarantee that products are free from harmful substances. The OEKO-TEX® ORGANIC COTTON labelled products have been tested from the time of cultivation to the time of manufacture for the presence of genetically modified organisms, pesticides, and harmful substances (OEKO-TEX Service GmbH 2023).

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Having a "Grüner Knopf" label indicates that a company fulfils its corporate responsibility via a sustainable supply chain. Furthermore, sustainability must extend not only to the supply chain, but also to the products themselves. There are several characteristics of sustainably produced products, including the following: Pesticides and hazardous chemicals are prohibited, hourly limits and fixed employment contracts are in place, anti-discrimination and anti-harassment policies are in place, and occupational safety requirements are in place. This label is an official seal of the German Association for International Cooperation (GIZ) (GIZ 2023). Several Bundesliga Clubs use these eco-labels to proof the sustainability of their products as seen in table 2.

Eco-Label	Football club
GOTS	SVW, D98, FCU, VfB, BOC, TSG, M05, KOE, SGE, WOB
Grüner Knopf	D98, FCU, KOE, SCF, SGE, WOB
Fairtrade	FCU, M05, SGE,
OEKO-TEX	KOE, SGE, WOB
Peta	BOC, SGE,
Others:	SGE, D98, TSG,
No labels	FCB, BVB, BMG, RBL, B04, FCA, HDH

Table 2: Bundesliga clubs and their used textile eco label. Own creation

The club TSG 1899 Hoffenheim (TSG) uses a small sustainability label next to their products in their online store to indicate they are "GOTS" (Global Organic Textile Standard) certified (TSG 1899 Hoffenheim Fußball-Spielbetriebs 2023). Among the labels displayed at SGE are the "Grüner Knopf," the "Cradle to Cradle", the "GOTS", and the "Fairtrade" labels. The club has furthermore created a landing page that describes what the club is doing for sustainability and what its sustainability goals are for the next few years (Eintracht Frankfurt Fußball 2023).

Some rankings mention WOB as a pioneer and the greenest club in the Bundesliga (Leagues 2022). As one of the first football clubs to create its own sustainable label, the club is a pioneer in this area. WOB describes its label "Grüne Fährte" as follows: "Grüne Fährte stands for the

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trail we want to leave behind as WOB, with the aim of gradually reducing our ecological footprint, starting with the use of sustainable materials, through compliance with ecological and social standards, to resource-saving packaging." (VfL Wolfsburg-Fußball, Nachhaltige Siegel im Wölfeshop 2023).

Furthermore, the 1. FC Köln (KOE) has developed its sustainability label "der Grüne Hennes", which is named after its mascot. In creating the label, four sustainability goals from the UN were considered (United Nations 2023): Goal 1: No poverty, Goal 3: Promoting health and well-being for people of all ages, Goal 4: Quality education, Goal 13: Climate action. Aside from this, the German football club has a partnership with other already existing textile labels, like the "GOTS" or the "Grüner Knopf" (1. FC Köln 2023).

There is, however, little information available about the underlying purpose of the certificate. To make an informed purchase decision, fans often need to dig deep to find all the information they need. There are several football clubs, such as WOB, SGE, and KOE, that have their own sustainability label. Throughout the fan shops and on their websites, they inform their fans about the labels and how they promote sustainability. Other clubs, such as Borussia Monchengladbach, lack information regarding sustainability and the merchandise they sell. Furthermore, interestingly there are mostly sustainable merchandise products like fan t-shirts or hoodies but little sustainable jerseys.

3. Literature Analysis

3.1 Sustainability Labels

The purpose of sustainability labels is to inform consumers about the sustainability of the supply chain and the product as already mentioned in Chapter 2.3. Labels have specified criteria that must be met by a minimum value and therefore ensure that the labelled products satisfy those criteria. Typically, sustainability labels emphasize characteristics such as those associated with responsible sourcing of raw materials, carbon footprints, composability, recyclability, etc. (UBQ™ 2021). The use of these labels is voluntary and is not regulated by the government. By using such labels, companies can raise awareness about their sustainability measures and differentiate themselves from their competitors (fairlyfab 2021). Labelling is a means to encourage consumers to purchase products that meet high social and environmental standards – “green products” (Morris, Koep and Damert 2021). Hence, through the provision of information about the sustainability of the production process, companies hope to, for example, increase demand for their products.

There are three key problems in the production process of textiles: “Human ecology, production ecology and waste disposal”. Ecological problems are associated with the production process (dyeing, printing, and washing), societal problems are related to the countries in which production is conducted, and waste disposal refers to the frequency of change in the industry – “fast fashion industry” (Koszevska 2011).

Labels can be classified into ecological, social and sustainability labels. It is the ISO-Norm 14024 that governs the labels to determine which labels may refer to themselves as eco-friendly, socially responsible, etc. (fairlyfab 2021). There are three types of ISO Eco-labelling (Type 1, 2 and 3) and three additional types of eco labels. The first type of labelling is industry labelling, which is specific to a particular industry. Secondly, there is corporate labelling, which is used

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by organizations that manufacture or sell goods. Furthermore, packaging labelling informs the customer about the product's packaging (Koszewska 2011). However, eco-labels can be differentiated in a variety of ways. There is also the possibility of making a distinction between first party and third party labels. Generally, a first party label indicates the environmental impact of a product without having been verified by an independent source. The purpose of this is to demonstrate the environment friendliness of the products or production methods of a company, its overall environmental friendliness, or its sustainable philosophy and values to the customer. Considering that the labelling is an individual initiative by the company, the focus is usually on the positive aspects of the product or behaviour from the company in terms of sustainability. To enhance the credibility of the label, companies may align it with industry standards or appropriate business and social behaviour. There are also occasions when companies provide their customers with negative information on their production process / products with their labels, often if the information becomes public anyway. In contrast, third-party labelling refers to a label that makes claims about the environmental impact of a product on behalf of a third party. The decision on this claim is based on certain standards and criteria. It is possible for the label to be voluntary or mandatory (Jones and Lansdell 2001). As mentioned in Chapter 2.3, there are currently 104 eco-labels available in the textile industry (Ecolabel 2023). Each of these numerous eco-labels has its own set of requirements, although they can change over time, which in total can be confusing or overwhelming for consumers. Therefore, it is essential to communicate effectively for customers to understand what the label represents and what sustainable requirements are met (Greenpeace 2018). According to several studies, problems like unreliable and untrustworthy eco-labelling are often caused by poor eco-labelling design, a lack of clarity, and insufficient formation (Raziuddin Taufique, et al. 2019).

An organization can benefit from labelling its products if there is a competitive business advantage over other companies. An effective label can enhance the reputation of a company

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or its brand as well as increase the number of sales and customers' willingness to pay (*WTP*) (Morris, Koep and Damert 2021). To ensure the success of these labels, it is essential to conduct auditing. In addition to being an important step for the credibility of the label, ensuring that the audit is accurate and not biased is very difficult. However, transparency and the transfer of information are some of the most important aspects of business today (Koszevska 2011). A consumer may also conclude that a missing label indicates that the aspect may not be applicable to the product, due to the large number of claims and labels available on the market. As an example, a missing organic claim on food products indicates that the food is not organic.

How much impact a label has on the purchase decision of a customer is different for each customer and depends furthermore on three important things: the size, format, and placement of the label; and the information provided by other sources like a webpage etc. (Jones and Lansdell 2001). There are several challenges associated with labelling. To obtain the label, the entire value chain must meet the requirements and strictly adhere to the sustainable production methods. Changing from a conventional approach to a sustainable one requires that all parts of the value chain align and shift their perspectives (Morris, Koep and Damert 2021). In addition, third-party labels are often expensive, resulting in an increase in the price of the product most of the time. It is possible that the price difference between a labelled product and a non-labelled product is too large for the customer to use the given information to make an informed purchase (Jones and Lansdell 2001).

Nevertheless, it is also important that the customer recognizes the good quality and the sustainable production methods that have been used (Morris, Koep and Damert 2021). To develop a label on its own, it is essential to put the customer's informational benefit as well as transparency throughout the entire value chain first. When assessing eco-labelling, companies should consider several aspects including consumer knowledge, consumer awareness and

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involvement, credibility of environmental quality, consumer trust, design and visibility of the label, persuasiveness, information clarity, and private benefits. Consumer knowledge refers to the consumer's familiarity with various eco-labels, considering terms and labelling schemes. These familiarities are essential to forming subjective knowledge and therefore what is believed to be known by the customer. Meanwhile, consumer awareness and involvement refer to the extent to which the customer is aware of the eco-label and the extent to which the customer is involved in gathering information about the label. A greater level of involvement is accompanied by a greater level of awareness and a higher likelihood to buy eco-labelled products (Raziuddin Taufique, et al. 2019). Consumers' trust in the credibility of a labels environmental quality depends on the believability of the intention of the company as well as the communication of the information. Environmental labelling information must relate to the product's environmental characteristics and must indicate the product's environmental superiority over non-eco-labelled products. Customers are greatly influenced by the design and visibility of the label. Environmental images are important for triggering emotional associations, such as a label depicting a pine tree making the customer feel that the product is environmentally friendly. Eco-label information is one of the most important components of the eco-label and must be persuasive. In this regard, it is crucial to ensure that the claims and label information are clear. As an example, the label should explain what the term "made from recycled material" means, potentially resulting in indicating the shares of old and new plastic within a product. As a future goal, it should also be possible to define these terms similarly for the consumer (Raziuddin Taufique, et al. 2019).

As a final point, consumers must always find a benefit in purchasing products with a sustainable label. This can be applied to several reasons, such as increasing their wellbeing or gaining recognition from others. In the presence of such a personal additional benefit, a higher *WTP* may result (Raziuddin Taufique, et al. 2019).

3.2 Intention to purchase

As already described, an increasing number of consumers are concerned about their consumption and its impact on the environment. As a result, they are seeking more information on products and their production processes and have higher *Intentions to purchase (ITP)* eco-friendly or green products (Vazifehdosta, et al. 2013). The selection and purchase of products (or services) that minimize negative environmental impacts over their life cycle is referred to as “green purchasing” and is adding price and performance criteria when making purchasing decisions with the goal of reducing environmental impacts (Vazifehdosta, et al. 2013).

According to the theory of reasoned action (TRA), behavioural intention is shaped by two factors: the attitude towards performing the behaviour and the subjective norm (Lee, et al. 2010), i.e., the perception of social pressure to adopt a specific behaviour. Attitudes are a set of beliefs about a specific object or action, which can be translated into the intention to perform the action. Intention, in turn, is the determination to act in a certain way (Ramayah, Lee and Osman 2010). Attitudes impact the intentions held and the more favourable the attitude, the bigger the intention to perform the behaviour will be. Moreover, as attitudes are predictors of purchase intentions, they eventually influence purchase behaviour. In general, empirical studies have shown a significant positive relationship between environmental intention and environmental behaviour (Chan 2001; Vazifehdosta, et al. 2013). Consequently, the greater the positive attitudes, the more likely the purchase intention and thus the more likely the consumer is to buy environmentally friendly products instead of conventional products.

Regarding football fans, other important factors need to be considered. The consumer behaviour of sport fans is highly emotionally driven and can be influenced by various motives, which reflects why people seek sport consumption experiences and engage with their favourite team or club. These motives include the desire to connect and maintain relationships with others

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through sport, to recognise excellence in sport, the desire to feel pride and belonging, and the longing for a break from the daily routine through enjoyable sporting activities (Funk, Beaton and Alexandris 2012). The main motives driving the purchase of team-licensed merchandise include loyalty and identification with the team, celebration of team success, and belonging to a community of other team supporters (Apostolopoulou, et al. 2013; Kwon and Kwak 2014). Depending on their personal history, fans associate symbolic meanings to their team's merchandise, which emphasize aspects such as fan identity, team support, social connection, personal values and self-expression. Wearing team apparel is considered to be a public demonstration of loyalty and love for the team and allows fans to identify themselves as supporters (Apostolopoulou, et al. 2013). The higher the levels of loyalty and team identification among the fans, the more likely they are to buy and regularly wear team-licensed merchandise because team identification provides emotional rewards, such as pride and excitement. Furthermore, team identification has a direct positive effect on the perceived quality and value of the licensed product, especially for hedonistic products like jerseys, shirts or scarfs, and can influence the *ITP*. Also, team performance can mitigate the influence of team identification on product evaluation. When a team is successful, fans place more value on team-licensed merchandise, while value may decrease when the team is not performing well (Kwon and Kwak 2014).

But how do sustainability measures influence the purchasing behaviour of fans and what motivates them to buy sustainable products? Walker and Kent (2009) state that CSR activities can improve brand image, enhance corporate reputation, increase sales, and strengthen customer loyalty (Walker and Kent 2009). Specifically in the sports industry, CSR can create 'secondary value' for organisations by creating an emotional connection with consumers. CSR activities can influence buying behaviour and be a significant predictor of word of mouth. Fans with high identification tend more to buy team-related products, attend games, and speak

favourably about the club they support. If they feel that their club also has a good reputation through CSR activities, these behaviours are reinforced. Also, Blumrodt, Bryson and Flanagan (2012) found that CSR engagement positively influences customer-based brand equity for football clubs (Blumrodt, Bryson and Flanagan 2012). The study indicates that CSR activities enhance customers' perceptions of the brand, leading to increased brand loyalty and positive word-of-mouth. Furthermore, it highlights the importance of communicating CSR initiatives to customers. Football clubs that communicate their mission, business objectives and CSR commitment on their website are more likely to improve their brand image and customer-related brand equity, which in turn influences customer purchase intentions. Moreover, it helps addressing consumers' concerns about greenwashing, which has negative impact on attitudes towards sustainable products and purchase intentions. Consumers' scepticism about the credibility of sustainability claims made by companies may discourage their *ITP*. Therefore, companies need to increase transparency and provide reliable information about their sustainable practices to reduce consumer doubts and increase the intention to buy sustainable products (Rausch and Kopplin 2021; Sharma, Aswal and Paul 2023).

3.3 Willingness to pay

The continuous growth of demand for more sustainable products is opposed by different potential barriers on the supply side, such as uncertain price premiums or longer lead times. Therefore, strategies are needed to help football clubs cope with risks, solve strategic challenges, and capture price premiums. For this purpose, it is essential to collect valid information on purchasing behaviour, or more precisely on the *Willingness to pay (WTP)*, to assess the feasibility of more sustainability and its financial consequences. In theory, *WTP* is a basic economic concept defined as the amount a person is willing to sacrifice in exchange for a particular good or service (Hanemann 1991). However, measuring *WTP* is challenging for many reasons, such as the complexity of human preferences, information constraints,

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behavioural biases, or potential strategic behaviour in surveys. These challenges require sophisticated survey methods, statistical procedures, and experimental designs to improve the accuracy and reliability of *WTP* measurements. Despite ongoing efforts, *WTP* measurement is a multi-faceted task due to the complexity of human decision making and judgement.

Consumer characteristics such as environmental concern and eco-literacy play an important role in customers' *WTP* for environmentally friendly products. Environmental concern refers to a consumer's general attitude towards protecting the environment and has been shown to be a powerful predictor of environmentally friendly intention and behaviour, including the purchase of environmentally friendly products. Eco-literacy, or environmental competence, on the other hand, refers to the extent to which consumers understand environmental issues and environmentally friendly products. These consumer characteristics are important predictors of different cognitive and behavioural responses to green products. Consumers with a higher level of environmental awareness and knowledge are more likely to adopt environmentally friendly behaviour and are more willing to pay a premium for green products (Schmuck, Matthes and Naderer 2018; Diekmann and Preisendörfer 2003).

Furthermore, research has shown that consumer participation influences consumers' *WTP* as well (Wei, Ang and Jancenelle 2018; Franke, Schreier and Kaiser 2010). Consumer participation refers to the extent to which consumers are involved in the design, production and delivery of goods and services by contributing effort, knowledge, information, and other resources (Dong and Sivakumar 2017). When consumers are given the opportunity to participate in the production and delivery process, it can enhance their perceived consumer effectiveness and increase their *WTP* for green products (Wei, Ang and Jancenelle 2018). In this context, fan engagement plays a crucial role too. Fan engagement is a specific form of customer engagement in the sport context and refers to strategies and activities that sport

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organizations use to connect with their fans on a deeper level (Biscaia, Johan Cruyff Institute 2021). Thereby, they are fostering a sense of belonging, loyalty, and emotional attachment. This is especially important for football clubs as they heavily depend on the involvement of their fans, economically and emotionally, as fan engagement encompasses various transactional and non-transactional interactions and experiences that go beyond the actual sporting events. Especially through the increasing usage of social media, fan engagement has extremely grown in importance. It increases brand loyalty, fosters revenue generation and marketing opportunities, and enhances the emotional connection of the fans and thus the fan experience (Yoshida, et al. 2014; Biscaia, Johan Cruyff Institute 2021). With regards to merchandising this could be translated into an increased *ITP* and higher *WTP*.

In a study that analysed Slovenian consumers and their purchasing habits in relation to eco-labels, only 13% stated that they pay attention to the environmental impact of production when buying clothing. Interestingly, only 29% were not willing to pay more for eco-labelled products than for non-labelled alternatives. Of those who were willing to pay more, the majority (47%) were happy with a premium of up to 10%, while 19% were open to a premium of 10-20%. Health considerations emerged as the main motive for a higher *WTP* (43%), followed by environmental concerns (38%) and perceived better product attributes (19%). Another study revealed different results regarding the willingness to pay a premium for clothing with a certified eco-label: Only 45% had a clear motive for such a willingness, 36% expressed reluctance and 19% remained neutral. Remarkably, this study also found a higher *WTP* among female participants (Rutten 2022).

Another study conducted by Ha-Brookshire and Norum (2011) explored the elements that influence consumers' *WTP* for sustainable cotton apparel and found that more than half of the respondents were willing to pay more for such shirts (Ha-Brookshire and Norum 2011). The

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survey was conducted by telephone among 500 nationally representative respondents. On average, consumers said they would be willing to pay \$5.54 more for shirts made from sustainable cotton. Several factors influencing consumers' *WTP* extra for socially responsible cotton clothing were identified, including attitude towards the environment, age, gender and product evaluation criteria such as brand name, washing requirements, colour and fit. In particular, a strong attitude towards environmental protection and socially responsible consumption was correlated with a greater likelihood of paying a premium for these apparel alternatives. In addition, the study identified age and gender as significant demographic factors influencing consumers' *WTP* a premium for organic clothing. For instance, younger participants as well as female respondents had a higher *WTP* for the sustainable cotton shirts.

Concludingly, consumers' *ITP* and *WTP* regarding sustainable products are influenced by various factors. The most important ones are their attitude towards sustainability or sustainable products, demographics like age and gender, a company's CSR activities or communication measurements and the usage of sustainability labels. Particularly for football fans, their emotional connection with their favourite club has a strong impact on *ITP* and *WTP* for merchandise in general. Also, fan participation and fan engagement can positively influence fans' *ITP* and *WTP*. However, for the specific context of this research study the literature is lacking in sufficient information and shows great research gaps. There were no particular studies found on the purchasing behaviour of football fans regarding sustainable merchandise or the consumer behaviour for sustainable sports merchandise in general. Also, the influence of sustainability labels in this specific context has not been measured yet.

4. Theoretical framework and hypothesis formulation

A pairing of Likert scale constructs and a combination of a conjoint and Gabor-Granger analysis is used as the theoretical foundation for determining the relevant analysis criteria. The dependent target variables in this research framework are the two constructs *ITP* and *WTP*. In this thesis, *ITP* is defined as the tendency of fans to buy a certain fan article, neglecting the area of sustainability at first. Meanwhile, the construct *WTP* connects to this by examining the extent to which fans are willing to spend more money on a product with such a sustainability label than on an ordinary merchandise item without it. By using these two target variables, precise conclusions can be drawn at the end of the research about the extent to which sustainability labels influence the consumer behaviour of fans and what this influence depends on.

As a first independent variable, participants' emotional connection to their respective favourite club is explored to evaluate fan identity, as previous research indicates that team identification serves as a precursor to decisions related to sport consumption (Bodet and Bernache-Assollant 2011). Therefore, fan identity is a crucial dimension to be measured in the evaluation of fan consumer behaviour. This study focuses on the internal dimension of fan identity by incorporating how the participants view themselves as dedicated supporters of the club. For this purpose, the construct of *Internal Legitimacy (IL)* is utilized, which has already been developed and applied by Biscaia et al. to conceptualise and measure fan identity (Biscaia, Hedlund, et al. 2018).

Fans often show the importance of a sports club to them by wearing the team's merchandise to express their support and show affiliation (Apostolopoulou, et al. 2013; Fetchko, Roy and Clow 2018). Therefore, this study infers the following hypotheses regarding the two consumer behaviour dimensions *ITP* and *WTP*:

H1: *IL* has a significant positive effect on (a) *ITP* and (b) *WTP*.

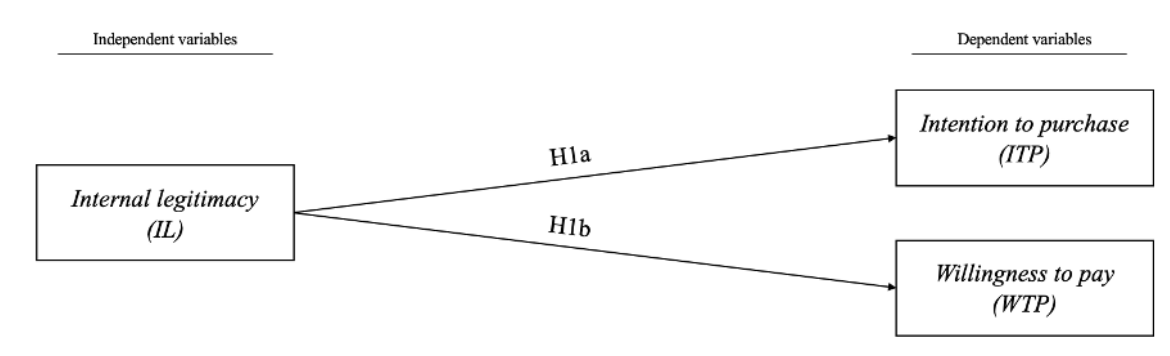


Figure 2: *IL* has a significant positive effect on (a) *ITP* and (b) *WTP*. Own illustration

Furthermore, previous research has shown that pro-environmental attitude towards sustainable clothing, even in the presence of an intention-behaviour gap, is significantly influencing the purchase intention (Chaturvedi, Kulshreshtha and Tripathi 2020; Rausch and Kopplin 2021; Chi, et al. 2014). Meanwhile, other studies suggest that sustainably conscious individuals with eco-friendly consumption patterns have a higher *WTP* for sustainable fashion products than consumers with lower awareness of sustainability (Rausch and Kopplin 2021). Based on these theoretical implications, the following hypotheses regarding the relationship between *SA* and *ITP* and *WTP* respectively are concluded:

H2: *SA* has a significant positive effect on (a) *ITP* and (b) *WTP*.

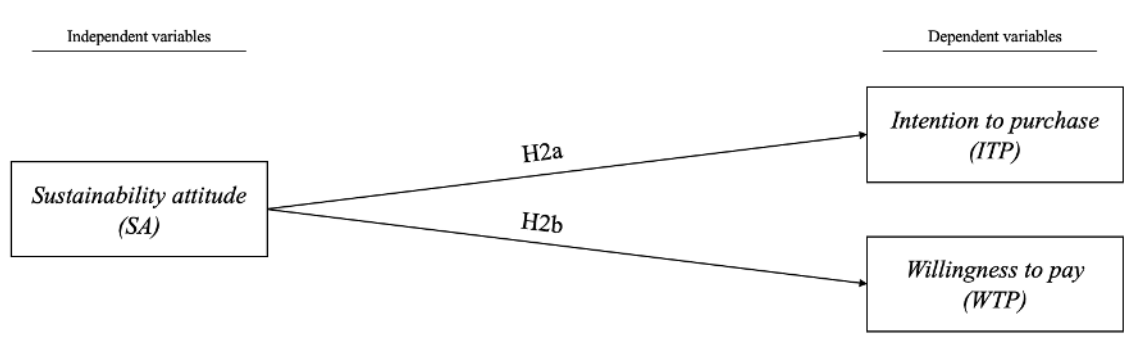


Figure 3: *SA* has a significant positive effect on (a) *ITP* and (b) *WTP*. Own illustration

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Additionally, individuals' awareness and concerns about the environment have a proven influence on their requirements for and general acceptance of sustainability labels (Testa, et al. 2015). At the same time, a sustainability label also functions as an information carrier for consumers, which is why such labels become increasingly relevant in purchasing decisions the better a consumer is informed about environmental issues (D'Souza, Taghian and Lamb 2006). Therefore, two additional dependent variables are created, *Sustainability criteria rating (SCR)* and *Perceived labelling relevance (PLR)*, which analyse the requirements and importance of certain attributes of sustainability certificates as well as measure the perceived relevance of such seals, and derive the following hypotheses:

H3: *SA* has a significant positive effect on (a) *SCR* and (b) *PLR*.

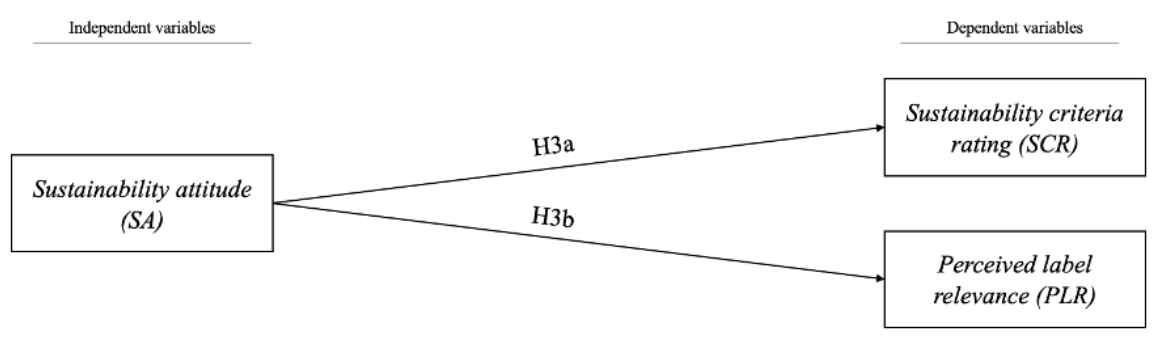


Figure 4: *SA* has a significant positive effect on (a) *SCR* and (b) *PLR*. Own illustration

Furthermore, to provide additional valuable insights into drivers of positive consumer behaviour change, the relationship between the individual *SCR* and the corresponding *ITP* and *WTP* is explored. This enables a more in-depth understanding of which attributes of sustainability labels have a particularly positive influence on the *ITP* and *WTP*:

H4: *SCR* has a significant positive effect on (a) *ITP* and (b) *WTP*.

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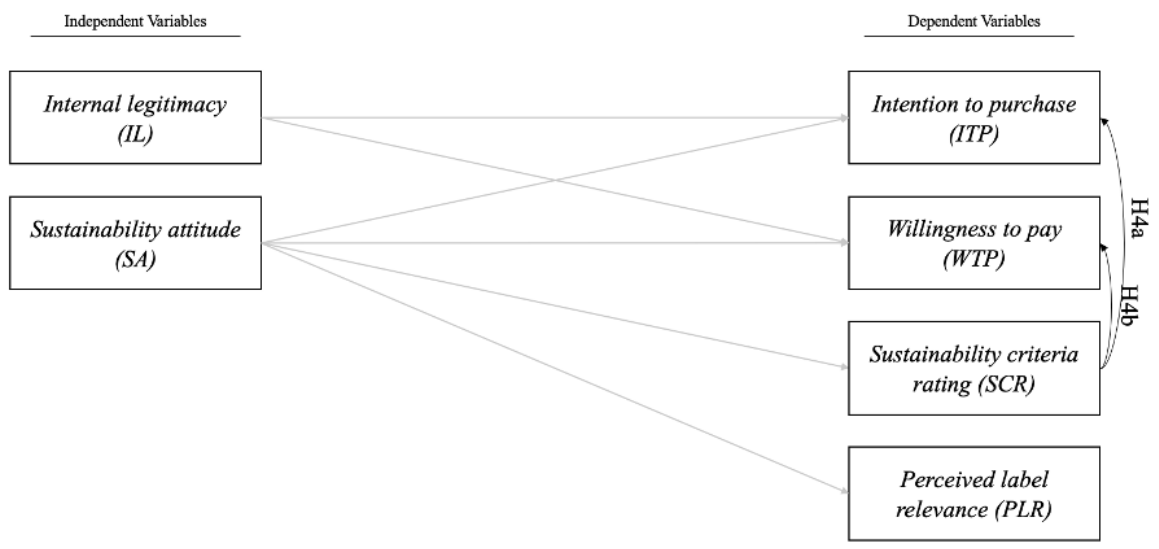


Figure 5: SCR has a significant positive effect on (a) ITP and (b) WTP. Own illustration

Finally, to provide further insights into the antecedents of consumer behaviour, demographic factors are examined for their potentially moderating relationships to the respective individual variables. This, in combination with the hypotheses defined above, leads to the following overall research model:

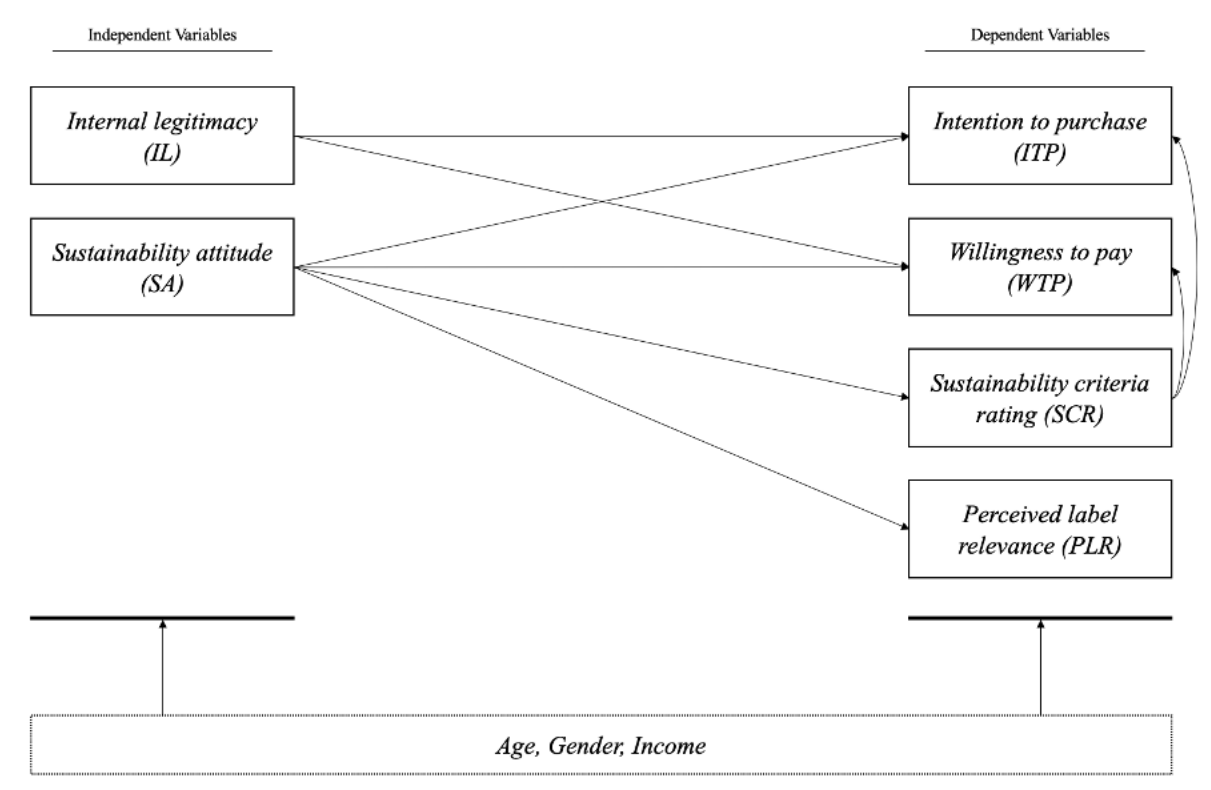


Figure 6: Overall research model. Own illustration

5. Methodology

5.1 Research Design

To test the hypotheses and relationships of this thesis, a quantitative approach is applied. This is based on an empirical survey conducted from October to November 2023, which focuses on the areas of emotional connection to the club, relevance of sustainability in fan merchandise, perception of and demands on sustainability seals, as well as resulting changes in consumer behaviour. For the former, the concept of *IL* by Biscaia et al. and corresponding questions are used to measure emotional fan identity (Biscaia, Hedlund, et al. 2018). Relevance of and attitudes towards sustainability in fan merchandise is measured via interrogating preferences in personal consumption, basic acceptance of additional costs for sustainable products as well as perceptions on football clubs' responsibilities and sufficiency of current actions in the context of sustainability. Regarding sustainability label perceptions, the participants are asked to rank or evaluate different aspects of such certificates in terms of importance and trustworthiness. Finally, the changes in consumer behaviour due to such sustainability labels are explored using a mixed approach of conjoint analysis and the Gabor-Granger method.

To enable a cross-club analysis, the survey was not limited to B04 fans but was expanded to include all 18 clubs in the First Bundesliga in the 2023/24 season. Consequently, at the beginning of the survey, club identification was queried so that the participant could then be asked personalised questions and shown visuals depending on their favourite club. Clubs that exceed the participant threshold of 30 are further analysed individually as consequently normal distribution of the results can be assumed (Scharnbacher and Holland 2013). To be able to determine the distinct preferences of the actual end buyers of football fan merchandise, it was necessary to specifically survey actual football fans. While non-football fans (or fans of clubs not included in the survey) could also participate in the survey to create a control group, the

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clear focus on actual fans of football clubs is essential for the detailed evaluation of the research question in the context of football merchandising. These communicate extensively in official and unofficial fan groups on social media, so that the dissemination of the survey was largely implemented on these forums. This is in line with the targeted benefits of online survey research in social media, which include increased reach through enhanced networking and participation effects as well as reduced use of resources such as financial resources or time required for the survey (Kayam and Hirsch 2012; Oeldorf-Hirsch and Sundar 2015).

In addition, the survey was sent to all registered fans of the club via the newsletter and social media channels of our partner club B04 to reach a significant number of participants especially in this focus group. The survey was made available in German and English, but only placed and distributed in German networks of the fan groups on the social platforms.

A total of 1342 clicks on the link to the online survey have been generated, whereas 1042 of these clicks (78%) referred to the general survey including all First Bundesliga clubs, leaving 295 clicks (22%) coming from B04's own channels. Of these 1342 clicks, 636 entries successfully completed the survey. Overall, there is a larger proportion of male participants (492 men [77.4%]; 139 women [21.9%]; 3 diverse [0.5%]), while the average age of the entire sample is 33.6 years. The grouped age structure of the sample is shown in figure 7.

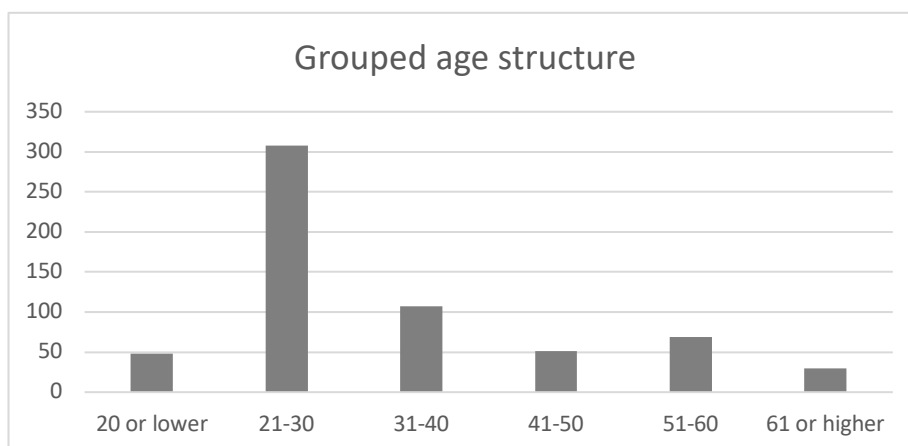


Figure 7: Grouped age structure. Own illustration. Adapted from survey data

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B04 represents the club that most participants identify as a fan of (24.2%), followed by FCB (9.7%) and BVB and SGE (9.1% respectively). In total, nine clubs reached the threshold of 30 participants, so that statistical normal distribution can be assumed for their results (Scharnbacher and Holland 2013). 57 participants (9.0%) stated that they were a fan of a club not covered in this study, whereas 18 respondents (2.8%) are not a football fan at all. The full distribution of club identification is illustrated in figure 8.

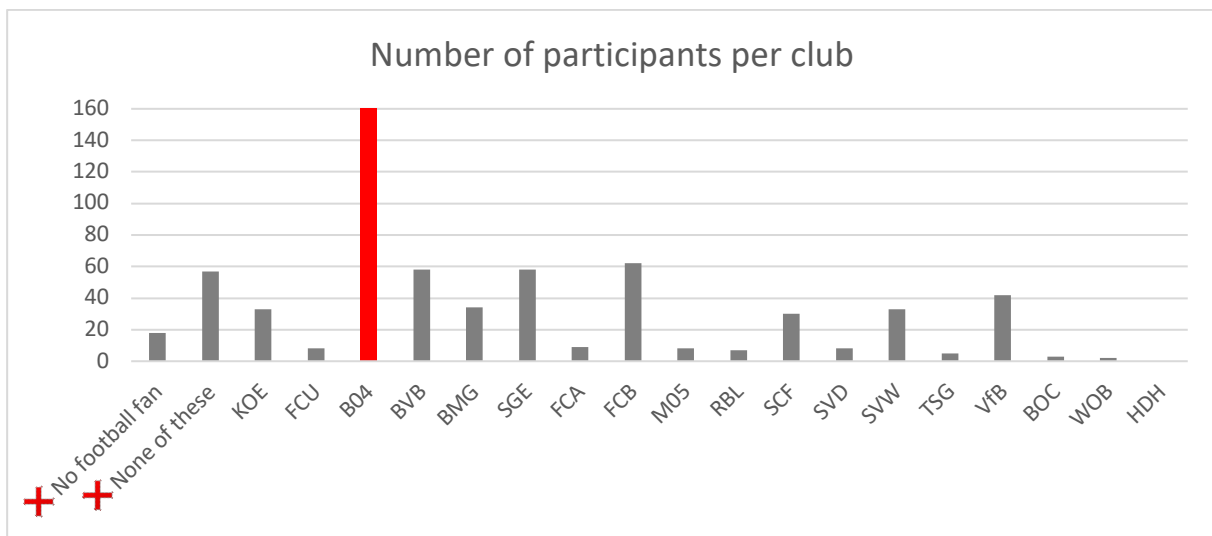


Figure 8: Number of participants per club. Own illustration. Adapted from survey data

The empirical approach and analysis of the model includes Spearman's correlation (r_s) and ordinal regression analysis (regression parameter = b). The statistical application SPSS was used to apply these statistical methods.

5.2 Methodical approach

The structure and content of the survey is based on relevant, context-specific literature. Apart from the quantitative questions and rankings, the scale constructs are defined by seven-point Likert scales. The anchors of the Likert scales are always either "Disagree at all" (empirical value: one) and "Totally agree" (empirical value: seven) as well as once "Not important at all" (empirical value: one) and "Very important" (empirical value: seven). Based on this approach,

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these items are considered ordinally and hence, an ordinal regression will be applied for statistical analyses.

After an introductory survey on the participants' club identification on the basis of 20 options (current eighteen First Bundesliga clubs plus the two special cases of non-football fans and club not listed), the two antecedent constructs are investigated. *IL* and its survey items are all based on the study by Biscaia et al. (2018) and are accordingly explored using a seven-point Likert scale, while *SA* was constructed and intensively tested by us.

The construct *SCR* requires a variation of more complex questions to enable a comparative assessment of the individual dimensions and characteristics of sustainability labels. Consequently, eight attributes of fan articles are evaluated regarding their relevance for the sustainability of the product on a scale of zero to ten with ten showcasing the highest relevance, before subsequently the importance of sustainability seals for the individual consumption of fan articles is asked using a seven-point Likert scale. Finally, eight different attributes of sustainability labels need to be ranked based on their relevance to the trustworthiness of a label (most relevant to most irrelevant), enabling a deeper analysis on which of these attributes are valued comparably more important than the others.

After assessing *ITP* via the Gabor Granger-related query on the general intention to buy a presented fan t-shirt, the participant is confronted with a comparison of the item with and without the sustainability label at the same price. In this setting, the assumption holds that the sustainability seal verifies all of the participant's requirements for a sustainable fan article. The participant must finally decide on one of the two options presented visually. The images of the products differed only in the addition of the sustainability seal (appendix 2). As long as the decision is made in favour of the article with the sustainability label, a further comparison of the two articles is shown afterwards, whereby the price of the sustainable article increases by

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€2 at each step while the price of the ordinary article remains constant. This procedure starts at the price point of €19.99 and goes on until a comparison of €27.99 for the sustainable product versus the common article still being at €19.99. Consequently, the maximum potential number of purchase decisions is five, which would occur if the participant always chose the sustainable option. By using such a mixed method of conjoint and Gabor Granger method, an assessment of an approximate *WTP* for a fan article with sustainability label in comparison to an ordinary product as well as an analysis of this in relation to antecedent variables can be conducted. The full questionnaire can be examined in appendix 2.

For the elements of the constructs to be considered representative, both the reliability and validity of the survey and the constructs created must be evaluated. All constructs were tested for reliability and validity prior to the survey using a test sample and in the final results. Since all values for Cronbach's alpha are above 0.7, all constructs achieve sufficient internal reliability (Cronbach 1951). This is further confirmed by the composite reliability values calculated via Confirmatory Factor Analysis, which both exceed the threshold of 0.6 for *IL* and *SA*, showcasing strong internal consistency within the constructs (Shrestha 2021). In addition, the average extracted variance of the constructs exceeds the threshold value of 0.5 respectively so that the convergence validity of the constructs can be assumed. Furthermore, the square root of the average extracted variance of each construct is greater than any of their correlations with each other. Consequently, the Fornell-Larcker criterion is fulfilled and sufficient discriminant validity of the constructs of this model can be assumed (Fornell and Larcker 1981).

Construct	Cronbach's Alpha	Composite reliability	Average Variance Extracted
<i>IL</i>	0.900	0.930067	0.769039
<i>SA</i>	0.869	0.911058	0.720154

Table 3: Statistical reliability and validity values. Own creation

6. Findings

6.1 Influence of *IL* on (a) *ITP* and (b) *WTP*

Based on the results of the survey, it can be concluded that the two variables *WTP* and *ITP* do not follow a normal distribution. Appendices 5 and 6 contain the average *WTP* and *ITP* for all eight clubs and the “other clubs”.

Team	<i>IL</i> Mean	<i>IL</i> Median
Total sample	5.63	6
B04	6.27 (1)	6.5
FCB	4.82 (10)	5.13
BVB	5.52 (6)	6
SGE	5.32 (7)	5.75
VfB	6.11 (2)	6.5
SCF	5.06 (9)	5.25
BMG	5.63 (4)	6
SVW	5.26 (8)	5.5
KOE	5.85 (3)	5.75
Other Clubs	5.61(5)	6

Table 4: Means and Median of *IL* among football fans separated by clubs. Own creation

Four questions were used to determine *IL*. Table 4 shows the different means and medians for the nine different Bundesliga clubs as well as the same sample and the results for the other nine clubs together. It should be noted, however, that all sample means are significant at the 0.01 level for both the total sample and the B04 sample and can therefore be considered representative of the mean of the respective population. There is an average level of *IL* of 5.48 out of the nine clubs and the “other clubs” and an average of 5.63 for the whole sample with 636 participants. Five of the nine clubs are above average, while four are below average. With a score of 6.27, B04 has the highest level of *IL* among the nine clubs. Aside from Leverkusen, only one other club has a value greater than six, namely VfB (6.11). On the other hand, there is only one club with a value below five, which is FCB (4.82).

The median of the whole sample is 6, which is aligned with the Median of BVB, Borussia Mönchengladbach (BMG) and the sample of the other clubs. B04 and the VfB have the highest median with 6.5. Again, FCB represents the lowest median with a value of 5.13.

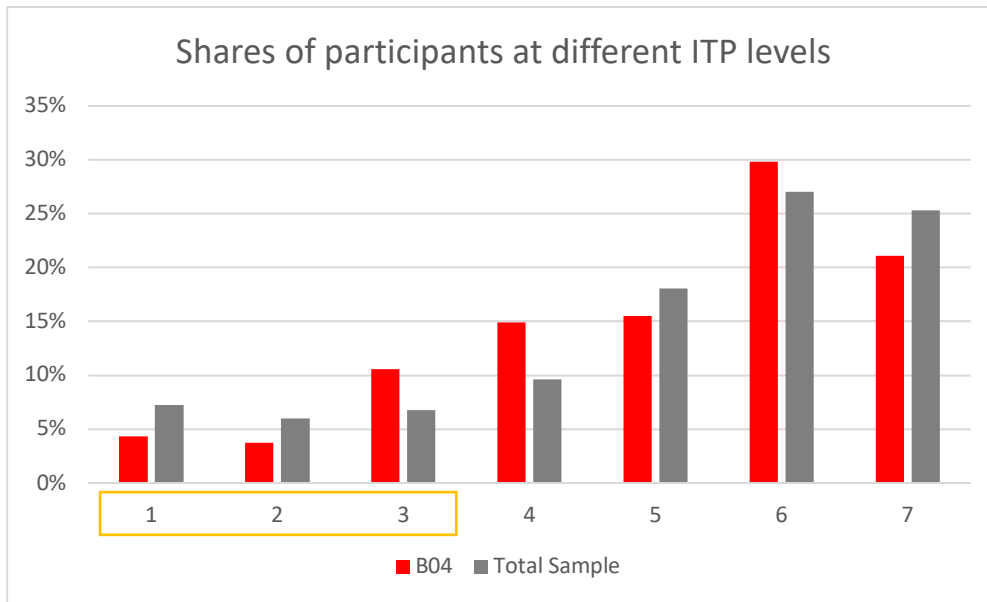


Figure 9: ITP distribution. Own illustration. Adapted from survey data

A further observation is that there is a tendency to a higher likelihood to buy merchandise products since the value chosen for the clubs is on average over five on the seven-point Likert scale (see figure 9). The average *ITP* is around a value of 5.08. The participants with an *ITP* value of three or below, where rated as a negative intention to purchase, since it is not likely that these fans buy a fan t-shirt soon. All other fans were seen as likely to purchase a fan t-shirt and therefore counted into the willingness to purchase analysis. As shown in the diagram above, 20% of the total fans have too little *ITP* (value below three). When calculating the percentage of fans who have an *ITP* above four, 70% of all fans are very likely to purchase a fan shirt. For B04 the percentage of people with no or little *ITP* is at 19%, as seen in the diagram above in red. The percentage of people with an *ITP* of five, six or seven is only at 66% and therefore a bit smaller as at the total sample.

Participants, on average, are willing to pay €23.77 for a fan t-shirt with a certified sustainability label. This is approximately €4 more than the current price for the "non-sustainable" fan t-shirt (€19.99). The results indicate that there is a certain level of *WTP* for a markup for sustainable products. Among the nine different examined clubs, it can be observed that BVB fans are willing to pay the highest price for a sustainable fan t-shirt, at an average of €25.13, followed by SCF fans at €25.02. In contrast, SVW fans are only willing to pay €22.82 and B04 fans €23.01, which are the two smallest amounts.

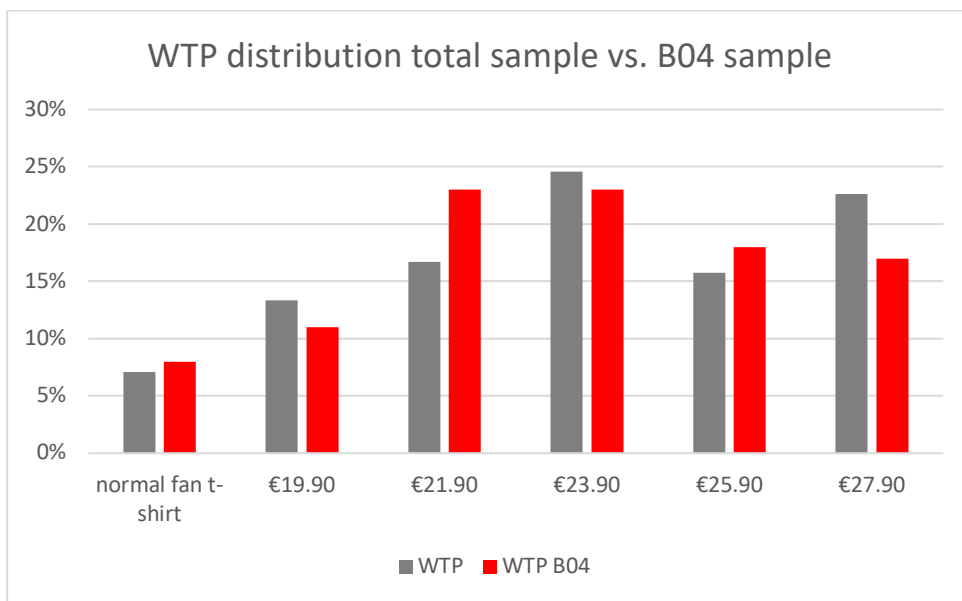


Figure 10: *WTP distribution. Own illustration. Adapted from SPSS data*

While there is a tendency towards a higher *WTP* (see figure 10), there is also a large group of people (13%) who are unwilling to pay a premium at all for a sustainable option as shown in the histogram above. All possible price ranges have been selected, which indicates that some people are willing to pay €8 more for a sustainable fan t-shirt. However, interestingly there is a bigger number of participants willing to pay the €27.90 as well as the middle, while fewer people are willing to pay €21.90 and €25.90. Moreover, the highest number of people have no *ITP* for merchandise products.

When examining B04 on its own, as seen in figure 10, it is apparent that the data contrasts with the total value. In most cases, B04 fans are unwilling to pay more for a sustainable fan t-shirt. When comparing all prices 11 % of the B04 fans will only purchase a fan t-shirt if the cost is the same as the normal fan t-shirt. Furthermore, around 23% of respondents are willing to pay €21.90 or €23.90 respectively and for higher prices, the percentage drops to 18% for €25.90 and 17% for €27.90.

For the analysis of the survey, a Spearman correlation and an ordinal regression were conducted. Rather than using a linear method, the ordinal method was used since the variables *WTP* and *ITP* are ordinal/nominal variables and not metric. Table 5 summarizes the variables related to the relationship between *IL* and *WTP* as well as *ITP*.

Team	<i>IL-WTP</i>	<i>IL-ITP</i>
	Spearman correlation	Spearman correlation
Total sample	-0.033	0.229***
B04	-0.063	0.167*
FCB	-0.115	0.253*
BVB	-0.130	0.014
SGE	0.014	0.203
VfB	0.043	0.418**
SCF	-0.046	0.089
BMG	0.028	0.478 **
SV SVW	0.592**	0.456**
KOE	0.302	0.491**
Other Clubs	-0.049	0.155

Table 5: Correlation parameters for *IL-WTP* and *IL-ITP*. Adapted from SPSS Data

*Correlation is significant at a 0.05 level (2-tailed).

**Correlation is significant at a 0.01 level (2-tailed).

The analysis of the correlation between *IL* and *ITP* (H1a) indicated that there was a positive correlation between the two variables with a Spearman correlation value of 0.229. Furthermore, the association with a p-value <0.001 is significant. This finding implies that hypothesis H1a

must be accepted, as there is a positive and significant relationship between *IL* and *ITP*. Based on the results, it can be concluded that when a fan has a strong relationship with a club, he or she has a greater *ITP* for merchandise products, such as the interrogated fan t-shirts.

Based on the analysis of the different fan groups, KOE, SVW and BMG fans have the highest correlation parameters ($r_s=0.491-0.456$) for this relationship, which can result from the long history between the clubs and the fans including the strong bonds between them. Furthermore, it is noticeable that there is no significant correlation between *IL* and *ITP* for BVB, SGE, and SCF. In the case of BVB, the p-value is close to 1 ($p=0.915$), which indicates a very high degree of probability that the data can be observed by chance alone. The other nine Bundesliga clubs combined also have a non-significant association between *IL* and *ITP* ($p=0.251$). Having a closer look at the results of B04, it can be observed that the club has the smallest correlation value ($r_s =0.167$) out of the clubs with a significant association. In conclusion, our findings indicate that there is a significant association between *IL* and *ITP* for some clubs, but not for all.

Team	Estimate	Odds ratio
Total sample	0.308	1.36**
B04	0.383	1.47**
FCB	0.212	1.24
BVB	0.034	1.03
SGE	0.198	1.22
VfB	0.577	1.78*
SCF	0.205	1.23
BMG	0.994	2.7**
SV SVW	0.823	2.28**
KOE	1.348	3.85**

Table 6: Regression parameters for *IL-ITP*. Adapted from SPSS Data

*Correlation is significant at a 0.05 level (2-tailed).

**Correlation is significant at a 0.01 level (2-tailed).

As shown in table 6, the regression analysis between the dependent variable *ITP* and the independent variable *IL* indicated that the model represents a significant improvement over a model without this determination variable ($p < 0.001$). There is a good fit between the model and the data. The Goodness of Fit test supports this conclusion. According to the results, the data is in agreement with the model ($p > 0.05$). There is a significant difference between the observed data and the fitted model. Furthermore, it is apparent that the model can predict 1.6% better than a null model or that the variable *IL* can predict 1.6% if people intend to purchase a product (purchase intention). The parameter estimate is 0.308, which indicates a positive relation between the two variables. Hence, the analysis indicates that an increase in *IL* increases the *ITP* (Odds ratio of 1.36), or in turn, there is a lower probability that fans will purchase merchandise from a club if they have a low emotional attachment to it.

The results of the regression analysis on a club basis are similar to those of the correlation analysis except for one difference. According to the regression analysis, there is no significant relationship between *IL* and *ITP* for FCB, SGE, BVB and SCF fans. The SCF, BVB and SGE fans had a non-significant relationship between the two variables in the correlation analysis. Based on Spearman's correlation, FCB's regression parameters should be significant. The difference in significance for FCB may be because it is on the margin of significance ($p = 0.047$) in Spearman's correlation analysis. According to the regression analysis, KOE has the greatest Odds ratio and therefore the greatest likelihood of fans with a higher *IL* also having a higher purchase intention, followed by BMG and SVW. An increase in *IL* by one unit increases the probability that a KOE fan will also move into the higher purchase intention group by 3.85. This is likely the result of the fact that these clubs have a long history and a strong relationship with their fans, as already mentioned. Yet, the smallest likelihood has BVB, as an increase in *IL* by one unit increases the probability of a higher purchase intention by 1.03. Comparing B04 to the other clubs, it is revealed that the club has the strongest association after SVW, BMG and

KOE ($p=0.007$). In addition, with the fourth-highest Odds ratio at 1.47, the probability of a B04 fan having a higher *ITP* increases by 1.47 based on a unit increase in *IL*.

Based on the results of the survey analysis, it was determined that *IL* does not have a significant impact on *WTP*. The Spearman correlation for all clubs combined is $r_s=-0.033$. Furthermore, it is not statistically significant ($p=0.459$). Considering this, hypothesis H1b must be rejected, since the relationship between *IL* and *WTP* is neither particularly significant nor particularly strong. The results of this study indicate that being a fan of a Bundesliga club with a strong fan identification has no bearing on how much you are willing to spend on a sustainable fan t-shirt for your favourite team.

Therefore, it is noticeable that for all clubs, the *IL* has not had a significant impact on the *WTP* except for SVW. A Spearman correlation value of $r_s=0.592$ and a p-value of below 0.001 indicates that the club not only has the only significant correlation but also the highest Spearman correlation value. Because all other clubs are in agreement with each other, this is probably the result of SVW's small sample size and the preferences of the participants.

Team	Estimate	Odds Ratio
Total sample	-0.022	0.98
B04	0.037	1.04
FCB	-0.185	0.83
BVB	-0.241	0.79
SGE	0.087	1.09
VfB	0.002	1.00
SCF	-0.130	0.88
BMG	-0.032	0.97
SVW	1445**	e^{1445}
KOE	0.762	2.14

Table 7: Regression parameters for *IL-WTP*. Adapted from SPSS Data

*Correlation is significant at a 0.05 level (2-tailed).

**Correlation is significant at a 0.01 level (2-tailed).

The data was analysed using a correlation analysis after Spearman, followed by an ordinal regression analysis. Based on the regression analysis (see table 7), the results of the correlation analysis after Spearman are confirmed. According to the model fit test, the model is not statistically significant ($p > 0.05$). Even if the p-value of the Goodness of Fit test is greater than 0.5, the model does not improve a model without the variable *IL*. According to these results, *IL* and *WTP* do not have any influence on one another. Based on an analysis of the different clubs, it is evident that this is true for all of them except SVW. However, while this is consistent with the Spearman correlation analysis, it needs to be questioned due to the small number of participants.

The regression analysis supports the results of the Spearman correlation analysis by indicating that hypothesis H1 needs to be partially rejected given that there is no significant association between *IL* and *WTP*.

The Spearman's correlation analysis as well as the regression analysis support that hypothesis H1a must be accepted, and the hypothesis H1b rejected by saying the *IL* has an impact on the *ITP* but not on the *WTP*.

7. Discussion

7.1 Influence of *IL* on (a) *ITP* and (b) *WTP*

The analysis above had a look at the effect of *IL* on *ITP* and *WTP*. The hypothesis H1a that *IL* has a significant positive effect on *ITP* was accepted and the hypothesis H1b that *IL* has a significant positive effect on *WTP* was partially accepted since there was a significant correlation with *ITP* but a non-significant relation with *WTP*.

The survey results indicate that being successful in the Bundesliga correlates with the fans' *IL*. This indication needs to be examined via further, more long-term research on *IL* and multiple surveys in different stages of the season or over multiple seasons.

Taking the high number of B04 and the VfB into consideration, both teams have a very successful season now with B04 being first and the VfB being third (October 2023). In comparison to this, the FCB is only second and out of the German football cup, which is for the club bad, and the *IL* mean is low. The literature supports it by stating that the success of a team is a huge factor in fan identification, and which therefore might impact the survey results (Hugenberg, Haridakis and Earnhardt 2014).

SVW KOE, BMG and VfB, these clubs can be classified as “traditional” Bundesliga clubs (Amir 2023). The high ranking in *IL* of the traditional clubs like KOE is already mentioned in Chapter 6.1 and caused by a long relationship between the clubs and the people in their region. Next to success, there are other factors like geography and the influence of friends that support fan identification (Hugenberg, Haridakis and Earnhardt 2014). The analysis results show that there is a significant positive impact from the variable *IL* on the *ITP*. This might be the case since the more the fans are emotionally attached to a club the more, they want to show off their loyalty and identify in public as a fan. The literature supports this by saying that the higher the level of loyalty and team identification among the fans, the more likely they are to buy and wear

team-licensed merchandise. Team identification provides emotional rewards when purchasing licensed products, such as pride and excitement (Kwon and Kwak 2014).

During the analysis of the effects *IL* has on the *ITP*, the Traditional clubs had high values and a high significance. All Traditional clubs, except for SVW and FCB, are also above the average *IL* value, which further supports this assertion. A reason for this result might be the long and strong relationship between the traditional clubs and their fans. This would be supported by the literature. As mentioned in Chapter 3.2, Apostolopoulou et al. (2012) and Kwon and Kwak (2014) state that loyalty and identification with the team are the most important driving forces behind the purchase of team-licensed merchandise (Apostolopoulou, et al. 2013; Kwon and Kwak 2014). As a public demonstration of loyalty and love for the team, it allows fans to identify themselves as supporters, illustrating the strong relationship between fans and their team. Contradictive to these results is the regression analysis of the BVB and SGE. Even if the clubs are seen as a traditional club by many fans there is no significant relationship between *IL* and *ITP*. This might result from the missing success now since the success of a sports team also influence the purchasing decision (Kim and James 2023) or a similar fan t-shirt variant compared to the previous year.

Looking at merchandise sales and the analysis, one can observe that there is a tendency for fans with a high fan identification to buy more products. A fan who is strongly attached to his or her club is likely to purchase a fan article more often than one who does not feel much emotional attachment to the club. Based on the literature, this finding is in accordance with the theory of Kwon and Kwak (2014) that a higher level of team loyalty and identification among fans will lead to a greater likelihood of the fans purchasing and wearing team-licensed merchandise regularly (Kwon and Kwak 2014).

Another aspect of this survey is that the VfB part was conducted among a highly devoted group of supporters. Next to B04 fans, the VfB fans have the highest *IL* value with an average of 6.11. However contradictory to this result is the analysis of the *ITP*. The VfB has an average *ITP* (4.6) below the average of all participants (5.08), which could indicate, that the ultras have a high legitimacy, but a low *ITP* compared to the overall average. According to this hypothesis, higher emotional attachment to a club, which is high for such ultra-groups, is correlated with a higher purchase intention. However, even if the analysis for this correlation is significantly positive for the VfB the Fans have a relatively low purchase intention and a very high *IL*. This might be the case since the hard-core fans have other ways of showing that they are fans (with choreographies for instance) and buy jerseys and not fan t-shirts as asked in the survey. In addition, it can be noted that even if B04's value is not as high as those of traditional football clubs, the correlation is still significant. In other words, *IL* has a significant impact on their fan's purchase intention. However, the team is a club with less tradition and do not have a long and strong relationship with their fans. The correlation could therefore be caused by the success of the team now. As of November 20th, 2023, B04 is ranked first in the First Bundesliga. These results are aligned with the study from Kwon and Kwak (2014) that a higher level of success will lead to a higher *IL* as mentioned in Chapter 3.2 and if a team is successful, fans place more value on team-licensed merchandise (Kwon and Kwak 2014).

The results of the regression analysis show that not all clubs have a significant relation between *IL* and *ITP*. Having a closer look at the clubs shows that only the traditional clubs as well as B04 had such a significant correlation. For B04 this might as well be caused by the great success at the moment as already mentioned before. The literature has demonstrated that high fan identification strongly influences the purchase decision, and the success of a club also influences fan identification, which implies that the success of a club also influences the purchase decision as mentioned before (Kim and James 2023).

The analysis showed on the other hand that there is no significant association between *IL* and *WTP* (*H1b* is rejected). There is a possibility that fans do not feel the need to have sustainable clothing if they are forced to pay more for it. Whether or not they care about belonging to their club and showing off with some jerseys, it does not have to be sustainable to meet their needs. Consequently, even if there is an *ITP*, they choose clothes that are not sustainable over more expensive clothes. In addition, the data was also analysed separately for each club to determine if any differences have an impact on the *WTP* for sustainable products, for instance, the current success of the club. Compared to the literature, these results contradict Kwon and Kwak (2014) assertion that higher fan engagement leads to higher *WTP* (Kwon and Kwak 2014).

The *WTP* differs per club, which could be not only influenced by the sustainability behavior but also by the brand behind the club and the supplier. Fans might be willing to pay more for brands like Borussia Dortmund

8. Recommendations

8.1 Utilise fan identification to push merchandise sales

Football clubs can derive several recommendations from the findings of the study regarding the influence of *IL* on the *WTP* and the *ITP*.

Firstly, the price for sustainable fan t-shirts should be set around €23.77. The results indicate a price increase of around 19% for sustainable merchandise products on average. However, it should be an accepted or “usual” price point like for example €23.90. Moreover, the clubs need to check if their fans are willing to pay more for sustainable merchandise or if they just say so in the survey and what such an accepted price point could be. The different football clubs should do further research about the behaviour of their fans since this survey is based on a small group of fans. Moreover, a test is necessary if the 19% add-up is for all merchandise products or if there are differences between the different products like the fan t-shirts and jerseys or hoodies.

Furthermore, the clubs need to figure out how much more sustainable merchandising products cost and decide if they want to take the burden of the cost if they are higher than €4 more per fan t-shirt or if not if they won't produce sustainably. Another option would be to find a solution to increase the *WTP* for sustainable products of the fans. Since there is no possibility to use emotional connection and fan identification to increase the *WTP*, clubs might use other options like using the *SA* or appealing to their environmental responsibility.

Another improvement could be the use of the emotional connection to the fans. Since the *IL* pushes the *ITP* football clubs can use this fan identification for instance for advertising. The advertising campaign can target the favourite player or show the fans, in general, to connect with them. Such campaigns will work even better when the team is successful since this pushes fan identification. Nevertheless, success can go away, and football clubs need to find a way to foster the *IL* sustainably. One idea would be to present themselves as approachable to their fans.

Letting fans participate in daily routines like training or with social media videos from the dressing room or team bus will show the fans a different and more “private” side. Fans can identify themselves more with the players and feel close to their favourite team.

B04 can use its current success to push their merchandising sales. They have the highest *IL* value. However, the club needs to think about some measures to keep the emotional connections to the fans on this level to also have a higher *ITP* even if the success will be a bit less. Measures in favour of fan identification could be to show their players like Victor Boniface or Granit Xhaka on social media with messages directed to the fans or do special fan activities like planting trees with fans. By actively engaging with the B04 fan community the club can foster a sense of inclusivity and the emotional connection with the fans is strengthened. B04 can use Instagram banners and pop-ups with players to get the conversion. With events, fan forums, and sustainability initiatives the fans will be involved in the decision-making process and can contribute to the club's culture. This engagement helps fans feel a deeper emotional connection to the club, making them more likely to invest in merchandise.

B04 can also try to engage fans in the process of being more sustainable since it is often associated with little sustainability. Since they have such a high *IL*, they can engage their fans and give them something to achieve together like “Together in a greener future”. Moreover, it has to be clear that the strategy is aligned with their behaviour to keep the trust of their fans and foster the connection.

9. Theoretical Contribution

The exploration of consumer behaviour within the contexts of merchandise and sustainability, specifically in the realm of football clubs, stands as a crucial area of study blending two domains: the psychology of emotional connection to a club and the accelerating trend of sustainable consumption. This study aims to shed light on the diverse effects between identification with the club as well as attitudes towards sustainability and consumer behaviour in specific relation to sustainability labels. In close cooperation with the partnering Bundesliga club B04, not only a status quo analysis in the Bundesliga environment but also an in-depth quantitative analysis of fan perspectives and consumer behaviour were conducted. The results provide the club with an extensive data foundation and practical recommendations for the further development of the planned sustainability label in the merchandise sector, for example, to what extent fans are prepared to bear the higher costs of sustainability by paying a higher price. Furthermore, this is one of the first studies to place the interplay between the three areas of fan identification in football, sustainability, and product labels in the business context of consumer behaviour. Beyond that, the results reveal insights into the perceptions of individual criteria and attributes of such sustainability labels by fans, so that this study presents a holistic analysis of sustainability labels in the context of football club identification as well as personal sustainability attitudes and purchasing behaviour among fans (not in the individual part).

10. Limitations

Apart from the interesting results, this study also faced several challenges and included certain limitations that impacted the generalizability and robustness of the findings.

First, the study refers solely to self-produced textiles, which excludes the significantly larger proportion of sales made by the outfitter Castore and is primarily due to contractual barriers. In addition, fans' perceptions tend to depend on the weekly team performance, which is why future studies should incorporate longitudinal research. Furthermore, most VfB participants are ultra fans, which fundamentally have a high emotional connection. Additionally, the study's exclusive focus on the German Bundesliga restricts its external validity, limiting the generalization of findings to football fans inside Germany.

The study uncovered a discrepancy between stated values and actual purchasing behaviour by fans, linking to previous findings regarding discrepancies in anonymous surveys between stated intentions towards sustainable products and the actual behaviour in reality. Furthermore, the reliance on online surveys introduces potential biases related to the clarity of questions and the visual presentation of products. Moreover, the limitation of product visibility to small generic photos and the varying mobile displays may compromise the accuracy of participant responses.

In addition, there are correlations between some demographic factors that make it difficult to examine individual variables. As can be seen in the whole group survey, for example, this includes a moderate to high correlation between *age*, *income*, and *level of education*. The investigation of the relationship between *income* and *WTP* was further limited as the highest possible response was limited to the open category "Over €65,000", which also showed the largest differences. Further investigation could allow more categories for top earners to be specified, or an accurate input option (potential data privacy issues).

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Appendix 1: Fanshop VfB example for Label certification (VfB Stuttgart 2023)



Appendix 2: Online Survey Questionnaire

- **Q1 Intro text: No respondent input** Introduction to the survey

(Required)

Welcome to this study regarding sustainability in football.

This study is being conducted in collaboration with **NOVA School** of Business and Economics as part of a **master's thesis**. The aim of the study is to promote **sustainable products** and related **certifications** in professional football and better adapt them to the needs of you fans.

The survey is divided into **4 sections** and requires less than **10 minutes** of your time. Of course, your information will remain **anonymous** and cannot be traced. Please **do not use** your browser's **back button** at any time during the survey, as your previous responses will be lost.

To show our appreciation for your efforts and time, we would like to **raffle** a current **jersey of your favorite club** among all participants. Simply enter your email address at the end of the survey to be entered into the prize draw.

We appreciate your participation. Thank you very much!

- **Q2 Multiple choice** Which football club in the First Bundesliga are you a fan of?

(One response required; One response allowed; Fix order of options; Place options in 3 columns)

Which football club in the First Bundesliga are you a fan of?

Group Part

- FC Bayern München
 - Borussia Dortmund
 - RB Leipzig
 - 1. FC Union Berlin
 - SC Freiburg
 - Bayer 04 Leverkusen
 - Eintracht Frankfurt
 - VfL Wolfsburg
 - FSV Mainz 05
 - Borussia Mönchengladbach
 - 1. FC Köln
 - TSG 1899 Hoffenheim
 - SV Werder Bremen
 - VfL Bochum
 - FC Augsburg
 - VfB Stuttgart
 - 1. FC Heidenheim
 - SV Darmstadt 98
 - None of these clubs
 - I'm not a football fan
-
- **Q3 Simple block External legitimacy**

Show this question only if the following conditions are met:

If all of these conditions are met:

Answer to question "Q2 Which football club in the First Bundesliga are you fan of?" is not equal to "Option 20"

- **Q4 Intro text: No respondent input Introduction Emotional Connection**
(Required)

Section 1/4: Emotional connection to the club

The following part deals with your emotional connection to the club as a fan. Please read the statements carefully and then rate whether you agree with them.

- **Q5 Randomisation block Randomisation block**
(Randomise order of questions)
- **Q6 Likert scale _ Fan loyalty**
(Required)

I consider myself a real fan of my club.

Labelled from Disagree at all (1) to Totally agree (7)

Group Part

- **Q7 Likert scale _ Loss of fan status**

(Required)

I would consider it a loss if I could no longer be a fan of my club.

Labelled from Disagree at all (1) to Totally agree (7)

- **Q8 Likert scale _ Importance of being a fan of my team**

(Required)

Being a fan of my club is very important to me.

Labelled from Disagree at all (1) to Totally agree (7)

- **Q9 Likert scale _ Fan identification**

(Required)

I want others to know that I'm a fan of my club.

Labelled from Disagree at all (1) to Totally agree (7)

- **Q10 Simple block Sustainability**

- **Q11 Intro text: No respondent input Introduction Sustainability & Football**

(Required)

Section 2/4: Sustainability & Football

The following part deals with the topic of sustainability and its role in football. Please read the statements carefully and then rate whether you agree with them.

- **Q12 Randomisation block Randomisation block**

(Randomise order of questions)

- **Q13 Likert scale _ Sustainability is important to me when buying products**

(Required)

Sustainability is important to me when buying fan articles.

Labelled from Disagree at all (1) to Totally agree (7)

- **Q14 Likert scale _ Preference for sustainable fan merchandise**

(Required)

I prefer sustainable fan articles over ordinary fan articles.

Group Part

Labelled from Disagree at all (1) to Totally agree (7)

- **Q15 Likert scale _ Sustainable fan merchandise preference**

(Required)

I accept additional costs for sustainable fan articles compared to normal fan articles.

Labelled from Disagree at all (1) to Totally agree (7)

- **Q16 Likert scale _ Responsibility for sustainability**

(Required)

A football club has a responsibility to act sustainably.

Labelled from Disagree at all (1) to Totally agree (7)

- **Q17 Likert scale _ Sustainability commitment**

(Required)

My favorite club is committed enough to sustainability.

Labelled from Disagree at all (1) to Totally agree (7)

- **Q18 Simple block Label**

- **Q19 Intro text: No respondent input Introduction Label**

(Required)

Section 3/4: Sustainable fan articles and sustainability seals

The following part deals with your requirements for sustainable fan articles and the role of sustainability seals. Please answer the questions in detail and answer them honestly and truthfully.

- **Q20 Multiple choice _ Frequency of purchasing fan merchandise**

(One response required; One response allowed; Fix order of options; Place options in 3 columns)

At what frequency do you buy fan articles from your club (e.g. jerseys, scarves, etc.)?

- Every 1-3 months
- Every six months
- Yearly
- Every 2 years
- Less common
- Never

Group Part

○ **Q21 Slider _ Sustainability attributes for fan merchandise**

(Required; Accept values from 0 to 10; Values must be multiples of 1)

Please rate the following attributes of fan articles in terms of their relevance for the sustainability of the fan article (0 = Absolutely irrelevant | 10 = Absolutely relevant). To do this, use either the movable sliders or the numeric input fields on the right-hand side.

Sum total labelled as Total

- Sustainable materials (bamboo fibers, recycled PET bottles, etc.)
- Fair working conditions (compliance with labor and human rights)
- Low air pollution (CO2 emissions)
- Sustainable supply chain
- Local production
- Low water & energy consumption in production
- Sustainable packaging (recyclable raw materials)
- Environmentally friendly additives (oil, bleach, etc.)

○ **Q22 Likert scale _ Importance of sustainability certification for football club fan merchandise**

(Required)

How important do you think sustainability seals are for certifying sustainable fan merchandise from football clubs?

Labelled from Not important at all (1) to Very important (7)

○ **Q23 Ranking _ Sustainability seal attributes ranking**

(Required)

Please rate the following attributes of sustainability labels according to their relevance for a trustworthy certificate of sustainability. To do this, move the individual attributes up or down so that the most important attribute is at the top and the least important is at the bottom.

- transparency
- Strict requirements for obtaining a seal
- Popularity of the seal or certifying organization
- Clear communication of measures
- Regular auditing/review of measures
- Credible partnerships / cooperation with other organizations
- Communication of long-term goals
- Information / education for consumers

• **Q24 Simple block Conjoint / GG Bayer 04 Leverkusen**

Show this question only if the following conditions are met:

If all of these conditions are met:

Answer to question "Q2 Which football club in the First Bundesliga are you fan of?" " " is equal to "Option 6" *Example B04 Track*

- **Q25 Intro text: No respondent input Introduction Conjoint**
(Required)

Section 4/4: Purchase decision

For the following questions, please assume that this sustainability seal is trustworthy and verifies all of your requirements for sustainable fan merchandise.



- **Q26 Simple block Conjoint: Bayer 04 Leverkusen**

Show this question only if the following conditions are met:

If all of these conditions are met:

Answer to question "Q2 Which football club in the First Bundesliga are you fan of?" is equal to "Option 6" *Example B04 Track*

- **Q27 Likert scale Query purchase intention**
(Required)

How likely do you think it is that you will buy yourself a fan shirt from your favorite club at a price of **19.99€** at any time in the future?

To illustrate, here is an example photo of a simple fan shirt:

Group Part



Labelled from Very unlikely (1) to Very likely (7)

- **Q28 Multiple choice _ Sustainable fan T-shirt choice**

(One response required; One response allowed; Fix order of options; Place options in 2 columns)

Assuming that the Fan T-shirt with sustainability label meets all your sustainability requirements, which option would you choose when buying a Fan T-shirt? Please click on the option you would choose.

- Fan T-shirt without sustainability seal



19.90€

- Fan T-shirt with sustainability seal

Group Part



19.90€

Show this question only if the following conditions are met:

If any of these conditions are met:

Answer to question "Q27 Query purchase intention " is equal to "4"

Answer to question "Q27 Query purchase intention " is equal to "5"

Answer to question "Q27 Query purchase intention " is equal to "6"

Answer to question "Q27 Query purchase intention " is equal to "7"

▪ **Q29 Multiple choice _ Sustainable fan T-shirt choice**

(One response required; One response allowed; Fix order of options; Place options in 2 columns)

Assuming that the Fan T-shirt with sustainability label meets all your sustainability requirements, which option would you choose when buying a Fan T-shirt? Please click on the option you would choose.

- Fan T-shirt without sustainability seal



19.90€

- Fan T-shirt with sustainability seal



21,90€

Show this question only if the following conditions are met:

If all of these conditions are met:

Answer to question "Q28 _ Sustainable fan T-shirt choice" is equal to "Option 2"

- **Q30 Multiple choice _ Sustainable fan T-shirt choice**

(One response required; One response allowed; Fix order of options; Place options in 2 columns)

Assuming that the Fan T-shirt with sustainability label meets all your sustainability requirements, which option would you choose when buying a Fan T-shirt? Please click on the option you would choose.

- Fan T-shirt without sustainability seal

Group Part



19.90€

- Fan T-shirt with sustainability seal



23.90€

Show this question only if the following conditions are met:

If all of these conditions are met:

Answer to question "Q29 _ Sustainable fan T-shirt choice" is equal to "Option 2"

- **Q31 Multiple choice _ Sustainable fan T-shirt choice**

(One response required; One response allowed; Fix order of options; Place options in 2 columns)

Assuming that the Fan T-shirt with sustainability label meets all your sustainability requirements, which option would you choose when buying a Fan T-shirt? Please click on the option you would choose.

Group Part

- Fan T-shirt without sustainability seal



19.90€

- Fan T-shirt with sustainability seal



25.90€

Show this question only if the following conditions are met:

If all of these conditions are met:

Answer to question "Q30 _ Sustainable fan T-shirt choice" is equal to "Option 2"

- **Q32 Multiple choice _ Sustainable fan T-shirt choice**

(One response required; One response allowed; Fix order of options; Place options in 2 columns)

Group Part

Assuming that the Fan T-shirt with sustainability label meets all your sustainability requirements, which option would you choose when buying a Fan T-shirt? Please click on the option you would choose.

- Fan T-shirt without sustainability seal



19.90€

- Fan T-shirt with sustainability seal



27.90€

Show this question only if the following conditions are met:

If all of these conditions are met:

Answer to question "Q31 _ Sustainable fan T-shirt choice" is equal to "Option 2"

- **Q154 Simple block Conjoint: Keiner dieser Vereine**

Show this question only if the following conditions are met:

If all of these conditions are met:

Answer to question "Q2 Which football club in the First Bundesliga are you fan of?" is equal to "Option 19" *Example None of these clubs track*

▪ **Q155 Likert scale Abfrage Kaufintention**

(Required)

How likely do you think it is that you will buy yourself a fan shirt from your favorite club at a price of **19.99€** at any time in the future?

To illustrate, here is an example photo of a simple fan shirt:



Labelled from Very unlikely (1) to Very likely (7)

▪ **Q156 Multiple choice _ Sustainable fan T-shirt choice**

(One response required; One response allowed; Fix order of options; Place options in 2 columns)

Assuming that the Fan T-shirt with sustainability label meets all your sustainability requirements, which option would you choose when buying a Fan T-shirt? Please click on the option you would choose.

- Fan T-shirt without sustainability seal

Group Part



19.90€

- Fan T-shirt with sustainability seal



19.90€

Show this question only if the following conditions are met:

If any of these conditions are met:

Answer to question "Q27 Query purchase intention " is equal to "4"

Answer to question "Q27 Query purchase intention " is equal to "5"

Answer to question "Q27 Query purchase intention " is equal to "6"

Answer to question "Q27 Query purchase intention " is equal to "7"

- **Q157 Multiple choice** _ Sustainable fan T-shirt choice

(One response required; One response allowed; Fix order of options; Place options in 2 columns)

Group Part

Assuming that the Fan T-shirt with sustainability label meets all your sustainability requirements, which option would you choose when buying a Fan T-shirt? Please click on the option you would choose.

- Fan T-shirt without sustainability seal



19.90€

- Fan T-shirt with sustainability seal



21.90€

Show this question only if the following conditions are met:

If all of these conditions are met:

Answer to question "Q156 _ Sustainable fan T-shirt choice" is equal to "Option 2"

- **Q158 Multiple choice _ Sustainable fan T-shirt choice**

Group Part

(One response required; One response allowed; Fix order of options; Place options in 2 columns)

Assuming that the Fan T-shirt with sustainability label meets all your sustainability requirements, which option would you choose when buying a Fan T-shirt? Please click on the option you would choose.

- Fan T-shirt without sustainability seal



19.90€

- Fan T-shirt with sustainability seal



23.90€

Show this question only if the following conditions are met:

If all of these conditions are met:

Answer to question "Q157 _ Sustainable fan T-shirt choice" is equal to "Option 2"

Group Part

- **Q159 Multiple choice _ Sustainable fan T-shirt choice**

(One response required; One response allowed; Fix order of options; Place options in 2 columns)

Assuming that the Fan T-shirt with sustainability label meets all your sustainability requirements, which option would you choose when buying a Fan T-shirt? Please click on the option you would choose.

- Fan T-shirt without sustainability seal



19.90€

- Fan T-shirt with sustainability seal



25.90€

Show this question only if the following conditions are met:

If all of these conditions are met:

XXX

Group Part

Answer to question "Q158 _ Sustainable fan T-shirt choice" is equal to "Option 2"

- **Q160 Multiple choice _ Sustainable fan T-shirt choice**

(One response required; One response allowed; Fix order of options; Place options in 2 columns)

Assuming that the Fan T-shirt with sustainability label meets all your sustainability requirements, which option would you choose when buying a Fan T-shirt? Please click on the option you would choose.

- Fan T-shirt without sustainability seal



19.90€

- Fan T-shirt with sustainability seal



27.90€

Show this question only if the following conditions are met:

Group Part

If all of these conditions are met:

Answer to question "Q159 _ Sustainable fan T-shirt choice" is equal to "Option 2"

- **Q168 Simple block Demographics (basic)**
- **Q169 Intro text: No respondent input Introduction Demographics**
(Required)

Demography

Last but not least, please provide your demographic data. Your information will of course remain anonymous and cannot be traced.

- **Q170 Multiple choice Gender**
(One response required; One response allowed; Fix order of options; Place options in 4 columns)

Which gender do you feel you belong to?

- man
- woman
- divers/others
- prefer not to say

- **Q171 Short answer Age**
(Required)

What age group are you in? Please enter your age in the box or leave it blank if you prefer not to say.

- **Q172 Multiple choice Level of education**
(One response required; One response allowed; Fix order of options; Place options in 5 columns)

What is your highest educational qualification right now?

- Lower school leaving certificate
- Abitur or equivalent degree
- Apprenticeship
- Bachelor's degree
- Master's degree
- Doctorate / PhD
- None of above: **✗** Not specified

- **Q173 Multiple choice Income**
(One response required; One response allowed; Fix order of options; Place options in 3 columns)

What is your approximate annual household income (before tax)?

- 0 - €13,000

Group Part

- €13,000 - €19,999
- €20,000 - €39,999
- €40,000 - €64,999
- Over €65,000
- No information

○ Q174 **Multiple choice Region (DE)**

(One response required; One response allowed; Fix order of options; Place options in 4 columns)

Which federal state do you live in?

- Baden-Württemberg
- Bavaria
- Berlin
- Brandenburg
- Bremen
- Hamburg
- Hessen
- Mecklenburg-Western Pomerania
- Lower Saxony
- North Rhine-Westphalia
- Rhineland-Palatinate
- Saarland
- Saxony
- Saxony-Anhalt
- Schleswig-Holstein
- Thuringia
- **✗** I don't live in Germany
- *None of above:* **✗** Not specified

• Q175 **Short answer** _ Email for prize entry

(Required)

If you would like to enter the jersey lottery, please enter your email address in the box below. This way we can contact you if you win.

• Q176 **Complete survey** Complete survey

Complete survey for participants and not redirect them.

• Q177 **Open-ended response** _ Additional comments

(Required)

If you have any questions or feedback about our survey or research, you can provide additional comments in the box below.

Group Part

Appendix 3: Mean values *IL* Overview

Mean values IL

<i>IL</i>	t	df	Two-sided significance	Sample mean	95% Lower Confidence Interval	95% Upper Confidence Interval
<i>Total sample</i>	97.969	617	<.001	5.63	5.4861	5.7833
<i>B04</i>	85.308	153	<.001	6.27	6.1266	6.5130
<i>FCB</i>	19.909	61	<.001	4.82	4.1785	5.4667
<i>BVB</i>	30.491	57	<.001	5.52	5.0390	6.0041
<i>SGE</i>	25.194	57	<.001	5.32	4.7564	5.8816
<i>VfB</i>	35.821	41	<.001	6.11	5.6521	6.5741
<i>SCF</i>	20.824	29	<.001	5.06	4.3888	5.7279
<i>BMG</i>	22.637	33	<.001	5.63	4.9458	6.3042
<i>SVW</i>	20.653	32	<.001	5.26	4.5604	5.9547
<i>KOE</i>	34.703	32	<.001	5.85	5.3870	6.3100
<i>Other Clubs</i>	28.411	56	<.001	5.61	5.0792	6.1313
<i>Male</i>	90.835	482	<.001	5.71	5.5907	5.8379
<i>Female</i>	39.875	129	<.001	5.39	5.1193	5.6538
<i>Income 1</i>	41.259	101	<.001	5.61	5.3382	5.8775
<i>Income 2</i>	26.577	52	<.001	5.66	5.2330	6.0878
<i>Income 3</i>	45.522	103	<.001	5.80	5.5478	6.0532
<i>Income 4</i>	48.789	141	<.001	5.67	5.4393	5.8987
<i>Income 5</i>	40.638	138	<.001	5.35	5.0938	5.6148
<i>Lower school</i>	32.619	16	<.001	6.46	6.0363	6.8754
<i>Apprenticeship</i>	54.510	115	<.001	6.00	5.7820	6.2180
<i>Abitur</i>	53.262	126	<.001	5.92	5.6975	6.1372
<i>Bachelor</i>	52.803	182	<.001	5.53	5.3274	5.7409
<i>Master</i>	36.249	129	<.001	5.25	4.9598	5.5325
<i>Doctorate/PhD</i>	9.366	12	<.001	4.60	3.5269	5.6654

Appendix 4: Mean values *ITP* Overview

Mean values ITP

<i>ITP</i>	t	df	Two-sided significance	Sample mean	95% Lower Confidence Interval	95% Upper Confidence Interval
<i>Total sample</i>	70.021	635	<.001	4.91	4.93	5.22
<i>B04</i>	38.445	153	<.001	5.07	4.82	5.34
<i>FCB</i>	19.909	61	<.001	4.40	3.84	4.97
<i>BVB</i>	16.743	57	<.001	4.55	4.01	5.10
<i>SGE</i>	31.563	57	<.001	5.67	5.31	6.03
<i>VfB</i>	16.466	41	<.001	4.60	4.03	5.16
<i>SCF</i>	17.989	29	<.001	4.40	4.82	6.05
<i>BMG</i>	17.928	33	<.001	5.47	4.85	6.09
<i>SVW</i>	15.454	32	<.001	4.94	4.29	5.59

Group Part

<i>KOE</i>	19.559	32	<.001	5.73	5.13	6.32
<i>Other Clubs</i>	19.781	56	<.001	5.21	4.68	5.74
<i>Male</i>	60.515	491	<.001	4.98	4.82	5.14
<i>Female</i>	36.032	138	<.001	5.46	5.16	5.76
<i>Income 1</i>	26.035	103	<.001	4.87	4.49	5.24
<i>Income 2</i>	21.784	53	<.001	5.19	4.71	5.66
<i>Income 3</i>	36.007	107	<.001	5.43	5.13	5.72
<i>Income 4</i>	32.618	144	<.001	5.08	4.77	5.39
<i>Income 5</i>	30.183	141	<.001	4.95	4.63	5.27
<i>Lower school</i>	10.615	16	<.001	4.94	3.95	5.93
<i>Apprenticeship</i>	30.459	120	<.001	5.22	4.88	5.56
<i>Abitur</i>	38.383	129	<.001	5.22	4.95	5.49
<i>Bachelor</i>	35.097	186	<.001	4.93	4.65	5.20
<i>Master</i>	32.092	133	<.001	5.13	4.81	5.44
<i>Doctorate/PhD</i>	8.382	13	<.001	4.93	3.66	6.20

Appendix 5: Mean values *WTP* Overview

Mean values WTP

<i>WTP</i>	t	df	Two-sided significance	Sample mean	95% Lower Confidence Interval	95% Upper Confidence Interval
<i>Total sample</i>	187.916	534	<.001	23.77	23.52	24.02
<i>B04</i>	98.786	153	<.001	23.01	22.51	23.42
<i>FCB</i>	47.272	36	<.001	24.01	22.98	25.04
<i>BVB</i>	53.671	38	<.001	25.13	24.18	26.08
<i>SGE</i>	60.242	53	<.001	25.02	22.78	24.35
<i>VfB</i>	45.782	29	<.001	24.63	23.53	25.73
<i>SCF</i>	62.343	24	<.001	25.02	24.19	25.85
<i>BMG</i>	48.121	29	<.001	23.57	22.57	24.57
<i>SVW</i>	46.912	25	<.001	22.82	21.82	23.83
<i>KOE</i>	50.589	29	<.001	23.63	22.68	24.59
<i>Other Clubs</i>	53.953	46	<.001	24.33	23.42	25.23
<i>Male</i>	161.640	411	<.001	23.66	23.37	23.95
<i>Female</i>	95.004	119	<.001	24.13	23.63	24.64
<i>Income 1</i>	76.077	83	<.001	23.31	22.70	23.91
<i>Income 2</i>	56.322	45	<.001	23.47	22.63	24.30
<i>Income 3</i>	85.222	96	<.001	23.81	23.26	24.37
<i>Income 4</i>	90.966	120	<.001	23.55	23.04	24.07
<i>Income 5</i>	84.206	115	<.001	24.54	23.96	25.12
<i>Lower school</i>	28.328	13	<.001	23.33	21.55	25.11
<i>Apprenticeship</i>	78.411	101	<.001	23.67	23.07	24.26
<i>Abitur</i>	90.014	119	<.001	23.30	22.79	23.81
<i>Bachelor</i>	104.014	150	<.001	23.52	23.07	23.96
<i>Master</i>	94.920	111	<.001	24.76	24.24	25.27

Group Part

<i>Doctorate/PhD</i>	21.985	9	<.001	24.70	22.16	27.24
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Appendix 6: Spearman correlations *IL-ITP/WTP* Overview

Team	<i>IL-WTP</i> Spearman correlation	<i>IL-WTP</i> p-value	<i>IL-ITP</i> Spearman correlation	<i>IL-ITP</i> p-value
Total sample	-0.033	0.459	0.229**	<0.001
B04	-0.063	0.432	0.167*	0.032
FCB	-0.115	0.499	0.253*	0.047
BVB	-0.130	0.431	0.014	0.915
SGE	0.014	0.920	0.203	0.127
VfB	0.043	0.820	0.418**	0.006
SCF	-0.046	0.829	0.089	0.640
BMG	0.028	0.884	0.478 **	0.004
SV SVW	0.592**	0.001	0.456**	0.008
KOE	0.302	0.105	0.491**	0.004
Other Clubs	-0.049	0.744	0.155	0.251

*Correlation is significant at a 0.05 level (2-tailed).

**Correlation is significant at a 0.01 level (2-tailed).

Appendix 7: Ordinal regression *IL-ITP* Overview

Team	Estimate	p-value	Factor
Total sample	0.308	0.001	1.36**
B04	0.383	0.007	1.47**
FCB	0.212	0.076	1.24
BVB	0.034	0.838	1.03
SGE	0.198	0.190	1.22
VfB	0.577	0.018	1.78*
SCF	0.205	0.442	1.23
BMG	0.994	0.001	2.7**
SVW	0.823	0.001	2.28**
KOE	1.348	0.001	3.85**
Other clubs	0.184	0.253	1.20

Group Part

**Correlation is significant at a 0.01 level (2-tailed).

*Correlation is significant at a 0.05 level (2-tailed).

Appendix 8: Ordinal regression *IL-WTP* Overview

Team	Estimate	p-value
Total sample	-0.022	0.730
B04	0.037	0.802
FCB	-0.185	0.216
BVB	-0.241	0.358
SGE	0.087	0.570
VfB	0.002	0.995
SCF	-0.130	0.693
BMG	-0.032	0.918
SVW	1445**	0.001
KOE	0.762	0.082
Other Clubs	-0.038	0.837

**Correlation is significant at a 0.01 level (2-tailed).

*Correlation is significant at a 0.05 level (2-tailed).

Appendix 9: Spearman correlations *IL-ITP/WTP* of total Sample

Spearman correlations

		ITP	WTP	IL
ITP	Correlation Coefficient	1.000	.166**	.217**
	Sig. (2-tailed)	.	<.001	<.001
	N	636	535	618
WTP	Correlation Coefficient	.166**	1.000	-.033
	Sig. (2-tailed)	<.001	.	.459
	N	535	535	520
IL	Correlation Coefficient	.217**	-.033	1.000
	Sig. (2-tailed)	<.001	.459	.
	N	618	520	618

**Correlation is significant at a 0.01 level (2-tailed).

Appendix 10: Ordinal regression *IL-ITP* of total Sample

Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
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Group Part

Intercept Only	493.638			
Final	458.367	35.271	1	<.001

Link function: Logit.

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	165.153	143	.099
Deviance	183.101	143	.013

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[ITP = 1]	-.921	.308	8.952	1	.003	-1.524	-.318
	[ITP = 2]	-.226	.295	.587	1	.443	-.803	.352
	[ITP = 3]	.303	.292	1.081	1	.299	-.268	.875
	[ITP = 4]	.840	.293	8.239	1	.004	.266	1.413
	[ITP = 5]	1.631	.298	29.923	1	<.001	1.047	2.216
	[ITP = 6]	2.847	.311	83.921	1	<.001	2.238	3.456
Location	IL	.308	.051	36.617	1	<.001	.208	.408

Appendix 11: Ordinal regression *IL-WTP* of total Sample

Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	311.071			
Final	310.952	.119	1	.730

Link function: Logit.

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	104.838	95	.230
Deviance	115.598	95	.074

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[WTP = 20]	-1.255	.363	11.931	1	<.001	-1.967	-.543
	[WTP = 22]	-.507	.359	1.986	1	.159	-1.211	.198
	[WTP = 24]	.461	.359	1.644	1	.200	-.244	1.165
	[WTP = 26]	1.214	.364	11.159	1	<.001	.502	1.927
Location	IL	-.022	.060	.129	1	.720	-.139	.096

Appendix 12: Relationship *IL-ITP/WTP* of B04

Spearman correlations *IL-ITP/WTP* of B04

Spearman correlations

		IL	ITP	WTP
IL	Correlation Coefficient	1.000	.167*	-.063
	Sig. (2-tailed)	.	.034	.432
	N	161	161	159
ITP	Correlation Coefficient	.167*	1.000	.481**
	Sig. (2-tailed)	.034	.	<.001
	N	161	161	159
WTP	Correlation Coefficient	-.063	.481**	1.000
	Sig. (2-tailed)	.432	<.001	.
	N	159	159	159

**Correlation is significant at a 0.01 level (2-tailed).

Group Part

Ordinal regression IL-ITP of B04

Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	187.424			
Final	180.032	7.392	1	.007

Link function: Logit.

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	105.186	95	.223
Deviance	93.325	95	.529

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[ITP = 1]	-.762	.954	.639	1	.424	-2.631	1.107
	[ITP = 2]	-.097	.926	.011	1	.917	-1.912	1.718
	[ITP = 3]	.882	.918	.923	1	.337	-.917	2.681
	[ITP = 4]	1.692	.925	3.349	1	.067	-.120	3.505
	[ITP = 5]	2.363	.933	6.407	1	.011	.533	4.192
	[ITP = 6]	3.757	.955	15.485	1	<.001	1.886	5.629
Location	IL	.383	.146	6.857	1	.009	.096	670

Ordinal regression IL-WTP of B04

Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	143.979			
Final	143.916	.063	1	.802

Link function: Logit.

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	66.455	59	.236
Deviance	66.731	59	.229

Link function: Logit.

Group Part

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[WTP = 19.9]	-.435	.948	.211	1	.646	-2.293	1.423
	[WTP = 21.9]	.343	.948	.131	1	.717	-1.514	2.200
	[WTP = 23.9]	1.159	.952	1.482	1	.223	-.707	3.024
	[WTP = 25.9]	2.058	.964	4.559	1	.033	.169	3.948
Location	IL	.037	.149	.061	1	.805	-.254	.328

Appendix 13: Relationship *IL-ITP/WTP* of FCB

Spearman correlations *IL-ITP/WTP* of FCB

Spearman correlations

		WTP	ITP	IL
WTP	Correlation Coefficient	1.000	-.115	-.115
	Sig. (2-tailed)	.	.499	.499
	N	37	37	37
ITP	Correlation Coefficient	.024	.253*	.253*
	Sig. (2-tailed)	.888	.047	.047
	N	37	62	62
IL	Correlation Coefficient	-.115	1.000	1.000
	Sig. (2-tailed)	.499	.	.
	N	37	62	62

*Correlation is significant at a 0.05 level (2-tailed).

**Correlation is significant at a 0.01 level (2-tailed).

Ordinal regression *IL-ITP* of FCB

Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	154.366			
Final	151.224	3.143	1	.076

Link function: Logit.

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	122.494	119	.395
Deviance	108.202	119	.751

Link function: Logit.

Group Part

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[ITP = 1]	-.788	.648	1.479	1	.224	-2.057	.482
	[ITP = 2]	.122	.625	.038	1	.845	-1.102	1.347
	[ITP = 3]	.645	.629	1.052	1	.305	-.588	1.878
	[ITP = 4]	.714	.630	1.285	1	.257	-.521	1.950
	[ITP = 5]	1.463	.651	5.052	1	.025	.187	2.740
	[ITP = 6]	2.146	.679	9.993	1	.002	.815	3.477
Location	IL	.212	.121	3.093	1	.079	-.024	.449

Ordinal regression *IL-WTP* of FCB

Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	77.789			
Final	76.525	1.263	1	.261

Link function: Logit.

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	63.417	63	.462
Deviance	58.184	63	.648

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[WTP = 20]	-1.828	.919	3.961	1	.047	-3.629	-.028
	[WTP = 22]	-1.698	.913	3.463	1	.063	-3.487	.090
	[WTP = 24]	-.793	.880	.813	1	.367	-2.517	.931
	[WTP = 26]	.349	.874	.159	1	.690	-1.364	2.063
Location	IL	-.185	.158	1.373	1	.241	-.495	.124

Appendix 14: Relationship *IL-ITP/WTP* of BVB

Spearman correlations *IL-ITP/WTP* of BVB

Spearman correlations

		ITP	WTP	IL
ITP	Correlation Coefficient	1.000	.113	.014
	Sig. (2-tailed)	.	.493	.915
	N	58	39	58
WTP	Correlation Coefficient	.113	1.000	-.130
	Sig. (2-tailed)	.493	.	.431
	N	39	39	39
IL	Correlation Coefficient	.014	-.130	1.000
	Sig. (2-tailed)	.915	.431	.
	N	58	39	58

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Ordinal regression *IL-ITP* of BVB

Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	144.897			
Final	144.856	.042	1	.838

Link function: Logit.

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	119.113	113	.329
Deviance	100.821	113	.787

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[ITP = 1]	-1.802	1.011	3.179	1	.075	-3.783	.179
	[ITP = 2]	-1.060	.980	1.169	1	.280	-2.981	.862
	[ITP = 3]	-.535	.971	.304	1	.582	-2.438	1.368
	[ITP = 4]	-.233	.969	.058	1	.810	-2.132	1.665
	[ITP = 5]	.608	.971	.392	1	.531	-1.296	2.512
	[ITP = 6]	1.430	.988	2.097	1	.148	-.505	3.366
Location	IL	.034	.169	.041	1	.840	-.297	.365

Group Part

Ordinal regression *IL-WTP* of BVB

Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	76.969			
Final	76.126	.843	1	.358

Link function: Logit.

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	55.829	59	.593
Deviance	54.176	59	.654

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[WTP = 20]	-3.094	1.622	3.641	1	.056	-6.273	.084
	[WTP = 22]	-2.736	1.605	2.906	1	.088	-5.882	.410
	[WTP = 24]	-1.617	1.567	1.064	1	.302	-4.689	1.455
	[WTP = 26]	-.990	1.554	.406	1	.524	-4.035	2.055
Location	IL	-.241	.266	.817	1	.366	-.762	.281

Appendix 15: Relationship *IL-ITP/WTP* of SGE

Spearman correlations *IL-ITP/WTP* of SGE

Spearman correlations

		ITP	WTP	IL
ITP	Correlation Coefficient	1.000	.110	.203
	Sig. (2-tailed)	.	.428	.127
	N	58	54	58
WTP	Correlation Coefficient	.110	1.000	.014
	Sig. (2-tailed)	.428	.	.920
	N	54	54	54
IL	Correlation Coefficient	.203	.014	1.000
	Sig. (2-tailed)	.127	.920	.
	N	58	54	58

** . Correlation is significant at the 0.01 level (2-tailed).

Group Part

Ordinal regression *IL-ITP* of SGE

Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	106.694			
Final	104.977	1.716	1	.190

Link function: Logit.

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	77.146	94	.897
Deviance	65.305	94	.989

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[ITP = 1]	-1.913	.954	4.022	1	.045	-3.782	-.043
	[ITP = 2]	-1.606	.911	3.109	1	.078	-3.391	.179
	[ITP = 3]	-.436	.833	.274	1	.601	-2.069	1.198
	[ITP = 4]	.397	.828	.230	1	.632	-1.226	2.020
	[ITP = 5]	1.792	.861	4.335	1	.037	.105	3.479
	[ITP = 6]	.198	.150	1.744	1	.187	-.096	.491
Location	IL	-1.913	.954	4.022	1	.045	-3.782	-.043

Ordinal regression *IL-WTP* of SGE

Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	112.638			
Final	112.315	.323	1	.570

Link function: Logit.

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	73.401	75	.531
Deviance	79.437	75	.341

Link function: Logit.

Group Part

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[WTP = 20]	-.590	.860	.470	1	.493	-2.276	1.096
	[WTP = 22]	.165	.855	.037	1	.847	-1.512	1.841
	[WTP = 24]	1.076	.868	1.537	1	.215	-.625	2.776
	[WTP = 26]	2.077	.904	5.275	1	.022	.304	3.849
Location	IL	.087	.152	.323	1	.570	-.212	.385

Appendix 16: Relationship *IL-ITP/WTP* of VFB

Spearman correlations *IL-ITP/WTP* of VFB

Spearman correlations

		ITP	WTP	IL
ITP	Correlation Coefficient	1.000	-.147	.418**
	Sig. (2-tailed)	.	.437	.006
	N	42	30	42
WTP	Correlation Coefficient	-.147	1.000	.043
	Sig. (2-tailed)	.437	.	.820
	N	30	30	30
IL	Correlation Coefficient	.418**	.043	1.000
	Sig. (2-tailed)	.006	.820	.
	N	42	30	42

**Correlation is significant at a 0.01 level (2-tailed).

Ordinal regression *IL-ITP* of VFB

Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	92.158			
Final	86.565	5.593	1	.018

Link function: Logit.

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	60.406	65	.638
Deviance	55.510	65	.793

Link function: Logit.

Group Part

Parameter Estimate

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[ITP = 1]	.240	1.632	.022	1	.883	-2.959	3.438
	[ITP = 2]	1.886	1.595	1.398	1	.237	-1.240	5.012
	[ITP = 3]	2.481	1.617	2.355	1	.125	-.688	5.649
	[ITP = 4]	2.954	1.637	3.257	1	.071	-.254	6.163
	[ITP = 5]	4.248	1.692	6.302	1	.012	.931	7.564
	[ITP = 6]	5.234	1.731	9.145	1	.002	1.842	8.626
Location	IL	.577	.265	4.754	1	.029	.058	1.096

Ordinal regression *IL-WTP* of VFB

Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	52.783			
Final	52.783	.000	1	.995

Link function: Logit.

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	38.859	35	.300
Deviance	32.556	35	.587

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[WTP = 19.9]	-1.858	2.531	.539	1	.463	-6.818	3.101
	[WTP = 21.9]	-.680	2.503	.074	1	.786	-5.586	4.226
	[WTP = 23.9]	.013	2.500	.000	1	.996	-4.887	4.913
	[WTP = 25.9]	.706	2.503	.080	1	.778	-4.200	5.613
Location	IL	.002	.392	.000	1	.996	-.765	.770

Appendix 17: Relationship *IL-ITP/WTP* of SCF

Spearman correlations *IL-ITP/WTP* of SCF

Spearman correlations

		ITP	WTP	IL
ITP	Correlation Coefficient	1.000	-.392	.089
	Sig. (2-tailed)	.	.052	.640
	N	30	25	30
WTP	Correlation Coefficient	-.392	1.000	-.046
	Sig. (2-tailed)	.052	.	.829
	N	25	25	25
IL	Correlation Coefficient	.089	-.046	1.000
	Sig. (2-tailed)	.640	.829	.
	N	30	25	30

*Correlation is significant at a 0.05 level (2-tailed).

**Correlation is significant at a 0.01 level (2-tailed).

Ordinal regression *IL-ITP* of SCF

Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	78.390			
Final	77.798	.591	1	.442

Link function: Logit.

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	80.398	74	.286
Deviance	64.923	74	.765

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[ITP = 2]	-1.177	1.362	.747	1	.387	-3.845	1.492
	[ITP = 3]	-.585	1.322	.196	1	.658	-3.177	2.006
	[ITP = 4]	-.167	1.310	.016	1	.899	-2.735	2.402
	[ITP = 5]	.623	1.313	.226	1	.635	-1.949	3.196
	[ITP = 6]	1.738	1.346	1.667	1	.197	-.900	4.375
Location	IL	.205	.251	.669	1	.413	-.287	.697

Group Part

Ordinal regression *IL-WTP* of SCF

Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	57.111			
Final	56.954	.156	1	.693

Link function: Logit.

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	58.740	55	.340
Deviance	50.834	55	.634

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[WTP = 19.9]	-3.859	1.868	4.270	1	.039	-7.520	-.199
	[WTP = 21.9]	-3.129	1.726	3.287	1	.070	-6.512	.254
	[WTP = 23.9]	-.599	1.573	.145	1	.703	-3.681	2.484
	[WTP = 25.9]	.723	1.579	.210	1	.647	-2.372	3.818
Location	IL	-.130	.300	.187	1	.665	-.719	.459

Appendix 18: Relationship *IL-ITP/WTP* of BMG

Spearman correlations *IL-ITP/WTP* of BMG

Spearman correlations

		IL	ITP	WTP
IL	Correlation Coefficient	1.000	.478**	.028
	Sig. (2-tailed)	.	.004	.884
	N	34	34	30
ITP	Correlation Coefficient	.478**	1.000	-.006
	Sig. (2-tailed)	.004	.	.976
	N	34	34	30
WTP	Correlation Coefficient	.028	-.006	1.000
	Sig. (2-tailed)	.884	.976	.
	N	30	30	30

**Correlation is significant at a 0.01 level (2-tailed).

Group Part

Ordinal regression IL-ITP of BMG

Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	80.527			
Final	65.830	14.698	1	<.001

Link function: Logit.

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	66.030	69	.579
Deviance	49.209	69	.966

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[ITP = 1]	2.285	1.384	2.728	1	.099	-.427	4.997
	[ITP = 3]	2.772	1.397	3.937	1	.047	.034	5.511
	[ITP = 4]	3.846	1.480	6.755	1	.009	.946	6.747
	[ITP = 5]	5.121	1.598	10.265	1	.001	1.988	8.254
	[ITP = 6]	6.482	1.709	14.381	1	<.001	3.132	9.833
Location	IL	.994	.277	12.932	1	<.001	.452	1.536

Ordinal regression IL-WTP of BMG

Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	62.334			
Final	62.323	.011	1	.918

Link function: Logit.

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	43.679	43	.442
Deviance	42.531	43	.492

Link function: Logit.

Group Part

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[WTP = 19.9]	-1.573	1.865	.712	1	.399	-5.229	2.082
	[WTP = 21.9]	-.593	1.844	.103	1	.748	-4.207	3.021
	[WTP = 23.9]	.820	1.847	.197	1	.657	-2.800	4.440
	[WTP = 25.9]	1.418	1.864	.578	1	.447	-2.236	5.072
Location	IL	-.032	.305	.011	1	.917	-.630	.567

Appendix 19: Relationship *IL-ITP/WTP* of SVW

Spearman correlations *IL-ITP/WTP* of SVW

Spearman correlations

		WTP	ITP	IL
WTP	Correlation Coefficient	1.000	.183	.592**
	Sig. (2-tailed)	.	.372	.001
	N	26	26	26
ITP	Correlation Coefficient	.183	1.000	.456**
	Sig. (2-tailed)	.372	.	.008
	N	26	33	33
IL	Correlation Coefficient	.592**	.456**	1.000
	Sig. (2-tailed)	.001	.008	.
	N	26	33	33

** . Correlation is significant at the 0.01 level (2-tailed).

Ordinal regression *IL-ITP* of SVW

Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	95.481			
Final	84.354	11.127	1	<.001

Link function: Logit.

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	97.800	95	.402
Deviance	67.791	95	.984

Link function: Logit.

Group Part

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[ITP = 1]	1.374	1.252	1.206	1	.272	-1.079	3.828
	[ITP = 2]	1.780	1.239	2.065	1	.151	-.648	4.208
	[ITP = 3]	2.652	1.267	4.380	1	.036	.168	5.135
	[ITP = 4]	3.445	1.329	6.722	1	.010	.841	6.049
	[ITP = 5]	4.249	1.401	9.197	1	.002	1.503	6.995
	[ITP = 6]	6.134	1.560	15.460	1	<.001	3.076	9.192
Location	IL	.823	.255	10.459	1	.001	.324	1.322

Ordinal regression *IL-WTP* of SVW

Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	52.914			
Final	39.730	13.183	1	<.001

Link function: Logit.

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	27.034	38	.908
Deviance	27.666	38	.892

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[WTP = 20]	6.588	2.407	7.488	1	.006	1.869	11.306
	[WTP = 22]	8.098	2.611	9.620	1	.002	2.981	13.215
	[WTP = 24]	10.784	2.924	13.605	1	<.001	5.054	16.515
Location	IL	1.445	.452	10.209	1	.001	.558	2.331

Appendix 20: Relationship *IL-ITP/WTP* of KOE

Spearman correlations *IL-ITP/WTP* of KOE

Spearman correlations

		ITP	WTP	IL
ITP	Correlation Coefficient	1.000	-.112	.491**
	Sig. (2-tailed)	.	.535	.004
	N	33	33	33
WTP	Correlation Coefficient	.152	.355	.302
	Sig. (2-tailed)	.424	.054	.105
	N	30	30	30
IL	Correlation Coefficient	.491**	.266	1.000
	Sig. (2-tailed)	.004	.135	.
	N	33	33	33

**Correlation is significant at a 0.01 level (2-tailed).

Ordinal regression *IL-ITP* of KOE

Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	54.579			
Final	42.293	12.286	1	<.001

Link function: Logit.

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	26.868	29	.579
Deviance	25.006	29	.678

Link function: Logit.

Parameter Estimate

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[ITP = 1]	4.845	2.255	4.616	1	.032	.425	9.266
	[ITP = 5]	6.618	2.361	7.855	1	.005	1.990	11.246
	[ITP = 6]	8.695	2.572	11.425	1	<.001	3.653	13.736
Location	IL	1.348	.417	10.427	1	.001	.530	2.166

Group Part

Ordinal regression *IL-WTP* of KOE

Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	63.524			
Final	60.500	3.024	1	.082

Link function: Logit.

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	38.701	35	.306
Deviance	39.518	35	.275

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[WTP = 19.9]	2.791	2.449	1.299	1	.254	-2.009	7.590
	[WTP = 21.9]	4.073	2.498	2.658	1	.103	-.823	8.969
	[WTP = 23.9]	5.423	2.585	4.399	1	.036	.355	10.490
	[WTP = 25.9]	6.520	2.651	6.049	1	.014	1.324	11.715
Location	IL	.762	.420	3.297	1	.069	-.061	1.585

Appendix 21: Relationship *IL-ITP/WTP* of other Clubs

Spearman correlations *IL-ITP/WTP* of other Clubs

Spearman correlations

		ITP	WTP	IL
ITP	Correlation Coefficient	1.000	-.099	.155
	Sig. (2-tailed)	.	.508	.251
	N	57	47	57
WTP	Correlation Coefficient	-.099	1.000	-.049
	Sig. (2-tailed)	.508	.	.744
	N	47	47	47
IL	Correlation Coefficient	.155	-.049	1.000
	Sig. (2-tailed)	.251	.744	.
	N	57	47	57

*Correlation is significant at a 0.05 level (2-tailed).

Group Part

Ordinal regression *IL-ITP* of other Clubs

Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	118.182			
Final	116.876	1.306	1	.253

Link function: Logit.

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	92.157	119	.968
Deviance	83.848	119	.994

Link function: Logit.

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[ITP = 1]	-.964	.956	1.017	1	.313	-2.837	.909
	[ITP = 2]	-.810	.948	.729	1	.393	-2.668	1.049
	[ITP = 3]	-.547	.939	.339	1	.560	-2.387	1.293
	[ITP = 4]	-.028	.930	.001	1	.976	-1.852	1.795
	[ITP = 5]	.706	.935	.571	1	.450	-1.125	2.538
	[ITP = 6]	1.747	.958	3.326	1	.068	-.131	3.624
Location	IL	.184	.161	1.313	1	.252	-.131	.499

Ordinal regression *IL-WTP* of other Clubs

Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	97.250			
Final	97.207	.042	1	.837

Link function: Logit.

Goodness-of-Fit

	Chi-Square	df	Sig.
Pearson	75.814	71	.326
Deviance	71.254	71	.469

Link function: Logit.

Group Part

Parameter Estimates

		Estimate	Std. Error	Wald	df	Sig.	95% Confidence Interval	
							Lower Bound	Upper Bound
Threshold	[WTP = 20]	-1.519	1.039	2.139	1	.144	-3.556	.517
	[WTP = 22]	-.873	1.021	.731	1	.393	-2.874	1.129
	[WTP = 24]	.002	1.013	.000	1	.998	-1.983	1.987
	[WTP = 26]	.547	1.017	.289	1	.591	-1.445	2.539
Location	IL	-.038	.174	.047	1	.829	-.378	.303