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Do Sustainable Values Translate into Purchases? Evidence from Generation Z in the Running Products Market

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Abstract

Martina Opálková: **Do Sustainable Values Translate into Purchases? Evidence from Generation Z in the Running Products Market**

Sustainability is frequently portrayed as a key driver of consumption among Generation Z, yet empirical evidence on whether sustainable values translate into actual purchasing behaviour remains limited, particularly in performance-oriented product categories. This study addresses this gap by examining the determinants of real purchasing behaviour among Generation Z consumers in the running products market. Using survey data from 400 respondents and applying Principal Component Analysis and Partial Least Squares Structural Equation Modelling (PLS-SEM), six latent determinants influencing purchase behaviour are identified. The findings show that actual purchasing behaviour is primarily driven by perceived product quality, durability, comfort, and technological innovation. In contrast, sustainable values show a statistically significant but negative relationship with actual purchasing behaviour, suggesting that sustainability considerations play a comparatively limited role in decision-making within the performance-oriented running products category. These results suggest that sustainability initiatives are more effective when integrated with tangible product performance rather than communicated as standalone value propositions.

Key words

Consumer decision-making, Purchase behaviour, Sport marketing, Sustainability relevance, Value perception, Behavioural drivers

JEL: M31, D12, Q56

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Introduction

The global sports goods market has undergone substantial transformation in recent years, driven by changing consumer lifestyles, increased emphasis on health and physical activity, and intensifying competition among brands. Sport consumption has evolved beyond purely functional considerations and increasingly reflects psychological, emotional, and social dimensions of consumer behaviour. As a result, understanding how consumers evaluate and select sport products has become a key concern for both researchers and practitioners. Generation Z represents a particularly important consumer segment within this evolving market. This cohort is characterised by a distinctive relationship with brands, shaped by expectations of authenticity, emotional engagement, and personal relevance throughout the purchasing process (Williams et al., 2010). For Generation Z consumers, brand interactions are not limited to transactional exchanges but are embedded within broader experiential and identity-related contexts. In the sports goods market, purchasing decisions are therefore often intertwined with personal values, lifestyle choices, and social belonging.

Previous research suggests that purchasing sport products constitutes a complex consumption experience that extends beyond functional utility. Priporas et al. (2017) argue that sport-related consumption increasingly incorporates aesthetic, emotional, and community-related values, reflecting the symbolic role that sport plays in contemporary society. At the same time, the sports goods market is characterised by high levels of competition, prompting brands to differentiate themselves not only through product performance but also through brand narratives, social positioning, and experiential appeal.

The growing importance of socio-psychological factors in consumer decision-making has been widely acknowledged in marketing literature. Consumers no longer rely exclusively on rational product attributes such as price, quality, or technical features, but also consider intangible elements including brand perception, identity expression, and social acceptance (Kaur et al., 2022). This shift is particularly relevant in sport-related markets, where products often serve both functional and symbolic purposes.

The economic significance of the sports goods sector further underscores the relevance of studying consumer behaviour in this domain. According to Eurostat (2025), expenditure on sports goods and services accounted for approximately 1.2% of total household spending in the European Union in 2020. In the Czech Republic, retail sales of sporting equipment have shown a steady upward trend, reaching CZK 33 billion in 2022. This growth reflects a broader societal development, as physical activity has become an integral component of European lifestyles. Eurostat (2022) reports that approximately 44%

of EU residents engaged in physical activity at least once a week in 2019, although participation rates in the Czech Republic remain comparatively lower at 35.6%.

Within the sports goods market, running products represent a distinct and analytically relevant category. Running is one of the most accessible and widely practised forms of physical activity, attracting consumers with varying levels of experience, motivation, and performance orientation. Consequently, running products combine high functional demands with strong experiential and personal dimensions, making them particularly suitable for examining the interplay between product attributes, brand perceptions, and consumer behaviour.

Despite the growing body of research on Generation Z and sustainable consumption, limited attention has been paid to how this cohort translates its preferences and values into actual purchasing behaviour within performance-oriented sport product categories. In particular, there remains a need to better understand which factors truly drive real purchasing decisions in the running goods segment and how functional performance, brand-related influences, and value based considerations interact in this context. Therefore, it is essential to examine the determinants shaping Generation Z consumers' purchasing behaviour in the running products market. By focusing on actual behaviour rather than stated intentions, this study aims to provide deeper insight into the relative importance of product-related, marketing-related, and value-oriented factors, thereby contributing to a more nuanced understanding of consumer decision-making in contemporary sport markets.

RQ: *Which key determinants influence Generation Z consumers' purchasing decisions in the running products market, and what is the relative strength of their effects on actual purchasing behaviour?*

To analyse the relationships between multiple factors influencing consumer behaviour, Partial Least Squares Structural Equation Modelling (PLS-SEM) represents a suitable analytical approach, particularly when examining complex models involving latent constructs (Ajzen, 1991, Ajzen 2020). PLS-SEM enables the simultaneous assessment of relationships between observed variables and latent determinants, as well as the evaluation of their effects on actual consumer behaviour.

The aim of this study is to identify the key factors shaping the purchasing decisions of young consumers in the running products market and to assess the relative strength of individual determinants influencing Generation Z consumers' purchase behaviour. To achieve this objective, a combination of exploratory factor analysis and structural modelling is employed. Specifically, Principal Component Analysis (PCA) is used to reduce the original set of observed variables and to construct latent

determinants, which subsequently serve as inputs for the PLS SEM model (Baláková et al., 2024; Shela et al., 2023).

1 Literature Review

Consumer decision-making has long been recognised as a multidimensional process influenced by a combination of cognitive evaluations, affective responses, and contextual factors. Early behavioural models primarily emphasised rational decision-making based on product attributes such as price and quality; however, contemporary research increasingly acknowledges that consumer behaviour is shaped by a broader set of psychological, emotional, and social determinants. This shift is particularly evident in markets characterised by symbolic consumption, strong brand engagement, and experiential value, such as sport-related products.

A foundational framework for understanding consumer behaviour is the Theory of Planned Behaviour (TPB), proposed by Ajzen (1991), which posits that behaviour is driven by behavioural intentions formed through attitudes, subjective norms, and perceived behavioural control. Within this framework, attitude towards behaviour plays a central role, reflecting an individual's overall evaluation of a product or action. In the context of consumer behaviour, attitudes encompass both cognitive assessments (e.g. perceived quality or usefulness) and affective responses (e.g. emotions, enjoyment, or attachment), making them particularly relevant for analysing brand-related decisions.

Building on this perspective, Solomon (2015) emphasises that brand attitude is closely linked to consumer preferences and represents a combination of emotional and cognitive evaluations. Positive brand attitudes have been shown to influence not only purchase intentions but also post-purchase behaviours such as satisfaction and loyalty. Empirical evidence supports this view within sport-related consumption. Chiu et al. (2018) found that attitude, subjective norms, and emotional expectations significantly affect consumers' intentions to purchase sports goods online, with past behaviour further reinforcing these intentions. Also, brand loyalty represents a further key outcome of favourable brand attitudes. Ilias et al. (2020) conceptualise loyalty as repeated purchasing behaviour resulting from a positive attitude towards a brand. Similarly, Akoglu and Özbek (2022) argue that loyalty is shaped by both cognitive and emotional components, including trust, perceived quality, satisfaction, and brand associations. Within this framework, perceived quality emerges as a particularly influential factor, as it serves as a key component of brand value and a signal of product reliability and performance (Falahat et al., 2018).

The importance of perceived quality and satisfaction is especially pronounced in performance-oriented product categories, such as sports equipment, where functional requirements and usage experience are central to consumer evaluation. Plessis (2011) highlights that consumer satisfaction often arises during the purchasing process itself rather than solely after product acquisition, emphasising the role of emotions, expectations, and experiential cues. This observation is particularly relevant for younger consumers, for whom the purchasing journey, digital interaction, and brand communication form an integral part of the overall consumption experience.

Consumer behaviour is also shaped by habitual and contextual factors. Sheth (2020) notes that many consumption decisions are driven by learned behavioural patterns and situational cues rather than deliberate evaluation alone. In parallel, increasing digitalisation has substantially altered the way consumers search for information, evaluate alternatives, and make purchasing decisions. Jensen et al. (2021) document a shift towards online platforms, where peer reviews, digital content, and brand transparency play a growing role in shaping consumer confidence. Trust in the brand, in particular, has been identified as one of the strongest predictors of purchase intention in online environments (Punyatoya, 2014).

These developments have intensified the complexity of contemporary consumer decision making. Rather than being purely rational, decisions are influenced by affective responses, social norms, and prior experiences (Stephens, 2023). This complexity is especially evident among Generation Z consumers, who represent a distinct cohort with unique behavioural characteristics. Generation Z, commonly defined as individuals born between 1997 and 2012 (Dimock, 2019), has grown up in a fully digital environment characterised by constant connectivity and the continuous sharing of experiences online. This technological immersion has profoundly shaped their communication styles, values, and expectations towards brands (Berkup et al., 2014). As the most technologically advanced, globally connected, and formally educated generation to date (McCrindle, 2009), Generation Z consumers tend to evaluate brands not only based on price or functional quality, but also on authenticity, emotional resonance, and personal relevance.

In sport-related markets, these characteristics translate into heightened expectations regarding both product performance and brand experience. Running products, in particular, combine high functional demands with strong experiential and identity-related dimensions. Despite the growing body of literature on consumer behaviour, branding, and sustainability, empirical evidence remains limited regarding how these mechanisms interact to shape actual purchasing behaviour within performance-oriented sport product categories. Addressing this gap is essential for advancing both theoretical understanding and managerial practice in contemporary sport marketing.

2 Methodology

This study employs a quantitative research design to explore the determinants shaping purchasing decisions of Generation Z consumers within the running products market. Empirical data were obtained through an online survey administered using the Computer Assisted Web Interviewing (CAWI) technique, enabling structured data collection through digital channels. The selection of this method reflects the digital orientation of the target population, which demonstrates a strong preference for online interaction and communication. Data were gathered over the period from December 2024 to March 2025 within the Czech Republic. Participant recruitment was facilitated by sharing survey links via social media platforms, allowing effective reach across the intended demographic group.

The final dataset comprises responses from 400 individuals belonging to Generation Z, defined as those born between 1997 and 2012. Quota sampling was applied to achieve a balanced gender composition, resulting in partial representativeness of the sample. Regarding educational attainment, a substantial proportion of respondents are either enrolled in or have completed higher education, which corresponds to the typical educational profile of this cohort. A detailed overview of the sample characteristics is provided in Table 1.

Table 1. Structure of respondents to the questionnaire survey (n=400)

		Questionnaire [%]	**Baseline pop. CZ [%]**
Sex	Male	46.3	49
	Female	53.7	51
Age group (year)	1997 - 2012	100	16.3
Education	Basic	5.5	13.5
	Non-Graduate Secondary	2.3	30.9
	High School Graduate	38.5	32.3
	Higher	0.3	1.6
	University	65.3	21.7
Monthly household income (CZK)	< 10000	37.3	10.6
	10001 - 20000	26.5	22.3
	20001 - 30000	13	25.8

	30001 - 50000	19	31.6
	> 50000	4.3	9.7
Size of the municipality of residence (population)	< 1.999	13	27.3
	2.000 - 4.999	8.8	12.2
	5.000 - 9.999	8.2	9
	10.000 - 49.999	14	21.4
	> 50.000	22.2	30.1

Source: Own questionnaire, Statistica, Czech Statistical Office (2021a-b, 2023a-d, 2024).

The survey instrument was designed to capture both the determinants underlying the choice of running products and respondents' actual purchasing behaviour. To allow for nuanced measurement of attitudes and perceptions, all items were assessed using a seven-point Likert type scale, which provides a high level of response sensitivity (Finstad, 2010). Items labelled Q1_1 to Q1_15 measured the perceived importance of product-related attributes during the selection process, while items Q2_2 to Q2_6 focused on the extent to which specific factors influence purchase decisions. Prior to the main data collection, a pilot study involving ten participants was conducted to verify the clarity, wording, and overall comprehensibility of the questionnaire items. Following data collection, the dataset was initially prepared and cleaned using Microsoft Excel. Subsequent statistical analyses were carried out using Statistica 14 for the purpose of factor extraction, and SmartPLS 4 for structural model estimation.

Partial Least Squares Structural Equation Modelling (PLS-SEM) was implemented in SmartPLS (version 4.1.0.8) to investigate the relationships between the latent constructs derived from the factor analysis and actual purchasing behaviour, operationalised through items Q3_1 to Q3_4. An overview of the questionnaire factors and their relative importance across the full respondent sample, expressed through mean values and standard deviations, is presented in Table 2.

Table 2. Evaluated factors that entered into the factor analysis

Q num	Variable	Avg	SD
Q1_1	Price	4.86	1.53
Q1_2	Brand	3.81	1.53
Q1_3	Comfort	6.40	1.01
Q1_4	Design	4.35	1.66
Q1_5	Material quality	5.76	1.33
Q1_6	Innovation and technology	4.14	1.74
Q1_7	Brand values (e.g., sustainability, ethics)	3.45	1.72
Q1_8	Color	3.86	1.82

Q1_9	Waterproofing	3.65	1.85
Q1_10	Discount	4.78	1.66
Q1_11	Product durability	5.76	1.27
Q1_12	Arch support	4.37	1.84
Q1_13	Material breathability	4.74	1.65
Q1_14	Product longevity	5.52	1.39
Q1_15	Made from sustainable materials	3.23	1.58
Q2_1	Recommendations from friends or family	4.83	1.75
Q2_2	Recommendations from social media influencers	2.55	1.46
Q2_3	Advertising (TV, online)	2.40	1.29
Q2_4	Personal experience with the brand	6.42	0.93
Q2_5	Online product reviews and ratings	5.16	1.40
Q2_6	Recommendations from retailers	3.74	1,57
	Real behaviour		
Q3_1	I regularly buy running products from my favorite running brands that I trust.	3.99	2.05
Q3_2	I run with a high-quality running brand, which makes me faster.	2.98	1.62
Q3_3	When shopping, I choose brands that focus on quality, even if they are more expensive.	5.06	1.62
Q3_4	I prefer to buy high-quality running products.	5.41	1.42

Source: Own questionnaire.

To identify underlying dimensions explaining how consumers evaluate the importance of attributes when selecting running products, a multivariate data reduction technique was applied. The analysis was conducted on variables Q1_1 to Q2_6 using Principal Component Analysis (PCA). An orthogonal Varimax rotation was employed, and only components with eigenvalues exceeding one were retained for further interpretation. This approach allows for the condensation of the original set of observed variables into a limited number of independent constructs representing shared variance patterns within the data.

The composition of each construct was determined by examining factor loadings, with a threshold value of 0.5 applied to ensure substantive contributions of individual variables. Variables exceeding this criterion were assigned to the corresponding construct. Prior to interpretation, the adequacy of the data for factor analysis was verified using the Kaiser–Meyer Olkin (KMO) measure and Bartlett's Test of Sphericity. While the extraction of components was performed in Statistica, diagnostic tests assessing sampling adequacy and intercorrelations were carried out in SPSS. The resulting constructs were subsequently conceptualised as latent variables within a reflective structural model designed to

assess their influence on actual consumer behaviour. Indicators of these latent constructs were derived directly from the PCA results, whereas behavioural outcomes were operationalised using variables Q3_1 to Q3_4.

The evaluation of the measurement model focused on the quality of individual indicators and the robustness of the latent constructs. Indicator performance was examined through outer loadings, applying a minimum acceptable value of 0.7 in line with established guidelines (Hair et al., 2021). Indicators failing to meet this criterion were excluded from subsequent analyses to improve model quality. Internal consistency and convergent validity were assessed at the construct level using multiple reliability measures. Specifically, Cronbach's alpha, Composite Reliability (CR), and Average Variance Extracted (AVE) were calculated, with recommended cut-off values of 0.7 for both Cronbach's alpha and CR, and 0.5 for AVE (Hair et al., 2014). Together, these metrics confirm the adequacy of construct reliability and the extent to which indicators capture shared variance.

To examine the statistical relevance of relationships within the structural model, a non parametric bootstrapping procedure with 5,000 resamples was employed, using a two-sided 95% confidence interval (Aguirre-Urreta & Rönkkö, 2018). The explanatory power of the model was assessed by calculating the coefficient of determination (R^2) for the endogenous construct representing actual behaviour (Hair et al., 2012). Potential multicollinearity among predictor constructs was evaluated using the inner Variance Inflation Factor (VIF), with values below 5 indicating acceptable levels (Hair et al., 2019). Discriminant validity was examined through the Heterotrait–Monotrait ratio (HTMT), where values below the threshold of 0.9 suggest sufficient construct distinctiveness (Henseler et al., 2015).

The model's predictive capability was assessed using Stone–Geisser's Q^2 statistic, with values exceeding zero indicating meaningful predictive relevance (Hair et al., 2019; Díaz-Ruiz et al., 2018). Overall model fit was evaluated using the Standardised Root Mean Square Residual (SRMR), with values not exceeding 0.08 considered acceptable (Hair et al., 2017).

3 Results

The survey conducted among 400 Generation Z respondents indicates that factors related to marketing communication and external recommendations were perceived as the least important when selecting running products. In particular, advertising (both television and online) and recommendations from social media influencers received the lowest mean importance scores, suggesting that these forms of communication play only a limited role in respondents' decision-making processes. Relatively low importance was also attributed to brand-related value attributes, such as sustainability, ethical

principles, and the use of sustainable materials, as well as to certain secondary product characteristics, including colour, waterproofing, and recommendations provided by retailers.

In contrast, the highest levels of importance were assigned to personal experience with the brand and running comfort, followed by material quality, durability, and product longevity. Online reviews and user ratings also received relatively high importance scores, particularly in the context of purchasing new or previously untested products.

To identify the underlying determinants associated with the selection of running products, Principal Component Analysis (PCA) was applied. The factor analysis included a total of 21 observed variables (Q1_1–Q2_6), which were assumed to exert an influence on consumers' product selection decisions. The appropriateness of applying factor analysis was evaluated using the Kaiser–Meyer–Olkin Measure of Sampling Adequacy (KMO) and Bartlett's Test of Sphericity.

As reported in Table 3, the prerequisites for factor analysis were fully satisfied, with a KMO value exceeding 0.8 and a statistically significant Bartlett's Test ($p < 0.05$). These results indicate a sufficient level of shared variance among the variables, confirming that factor analysis is a highly suitable method for data reduction in this case. The Bartlett's Test further demonstrates a high level of statistical significance, supporting the presence of meaningful correlations within the dataset.

Table 3. Verification of the suitability of the PCA factor analysis application

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.847
Bartlett's Test of Sphericity	Approx. χ2	3582.41
	df	210
	p-value	0.000

Source: IBM SPSS Statistics

The newly extracted constructs, together with their corresponding eigenvalues and percentages of explained variance, are presented in Table 4. Determinants were retained for further analysis when their eigenvalues exceeded the threshold value of one. Based on this criterion, six distinct determinants were identified from the original set of 21 observed variables. As shown in Table 4, the PCA solution accounts for a total of 65.42% of the variance in the original dataset, indicating a satisfactory level of explained variability and supporting the adequacy of the factor structure derived from the analysis.

Table 4. New determinants. Total Variance Explained - Initial Eigenvalues

New Factors	Total	% of Variance	Cumulative %
1. Perceived product quality and durability	5.63	26.80	26.80
2. Social impact and marketing	2.26	10.78	37.59
3. Price and discounts	1.92	9.15	46.73
4. Appearance	1.54	7.35	54.08
5. Sustainable value	1.22	5.81	59.90
6. Technology and innovation	1.16	5.53	65.42

Source: Statistica software, own processing. Rotation converged in 6 iterations.

Six determinants were extracted from the PCA solution. Determinant 1 – *Perceived product quality and durability* represents functional and material-related product attributes, including durability, longevity, material quality, and breathability. This determinant explains the largest share of the total variance (26.80%). Determinant 2 – *Social impact and marketing* comprises variables related to external communication and social influence, such as advertising, influencer recommendations, and retailer recommendations, accounting for 10.78% of the explained variance. Determinant 3 – *Price and discounts* reflects price-related considerations and the availability of discounts, explaining 9.15% of the total variance. Determinant 4 – *Appearance* includes visual product attributes, namely colour and design, and accounts for 7.35% of the explained variance. Determinant 5 – *Sustainable value* captures sustainability-related aspects, including the use of sustainable materials and brand values associated with ethics and environmental responsibility, explaining 5.81% of the variance. Finally, Determinant 6 – *Technology and innovation* encompasses variables related to technological features and brand related innovation, contributing 5.53% to the total explained variance.

The newly identified determinants were subsequently examined to assess their effects on actual consumer behaviour in the context of purchasing running products. Based on these determinants, a set of research hypotheses was formulated to address the research question concerning the relative strength of influence exerted by individual determinants on the purchase decision-making of Generation Z consumers in the running products market.

H1: Perceived product quality and durability have a significant effect on actual consumer behaviour.
H2: Social impact and marketing have a significant effect on actual consumer behaviour.
H3: Price and discounts have a significant effect on actual consumer behaviour.
H4: Appearance has a significant effect on actual consumer behaviour.
H5: Sustainable value has a significant effect on actual consumer behaviour.

H6: Technology and innovation have a significant effect on actual consumer behaviour.

To enable hypothesis testing, the extracted determinants were incorporated into the PLS-SEM framework as latent constructs, and their effects on actual purchasing behaviour related to running products were examined. The indicators defining each latent construct were derived from the preceding PCA results and are reported in Table 5. Only indicators with factor loadings exceeding 0.5 were retained for inclusion in the model. Indicator adequacy within the PLS SEM model was assessed using outer loadings (O.L.), as presented in Table 5. All outer loadings were statistically significant based on their p-values. Although three indicators (Q2_2, Q2_4, and Q3_1) exhibited loadings slightly below the recommended threshold of 0.7, their values remained above 0.65 and were therefore retained in the model. Indicators that failed to meet the required criteria are marked by a dash in Table 5 and were excluded from further analysis.

Table 5 further reports Cronbach's alpha, Composite Reliability (CR), and Average Variance Extracted (AVE). All constructs exceed the established cut-off values, confirming satisfactory internal consistency and convergent validity. Indicators of actual behaviour are reported separately in Table 6, as these variables were not included in the initial PCA and therefore do not display factor loadings. Discriminant validity was evaluated using the Heterotrait Monotrait ratio (HTMT). All HTMT values remained below the recommended threshold of 0.9 (mean HTMT = 0.379), indicating adequate discriminant validity among the latent constructs.

Table 5. Results of factor analysis, factor loadings, and summary of latent variable assumptions

Det.	Q num.	Factors	F.Load.	O. L.	Cr. α	CR	AVE	Inner VIF
Perceived product quality and durability	Q1_3	Comfort	0.536	-	0.813	0.877	0.642	1.41
	Q1_5	Material quality	0.757	0.785				
	Q1_11	Product durability	0.852	0.885				
	Q1_13	Material breathability	0.649	-				
	Q1_14	Product longevity	0.790	0.826				
	Q2_4	Personal experience with the brand	0.571	0.699				
Social impact and marketing	Q2_1	Recommendations from friends or family	0.524	-	0.397	0.758	0.615	1.129
	Q2_2	Recommendations from social media influencers	0.712	0.66				
	Q2_3	Advertising (TV, online)	0.734	0.891				
	Q2_6	Recommendations from retailers	0.614	0.898				
Price and discounts	Q1_1	Price	0.845	0.952	0.685	0.849	0.74	1.076
	Q1_10	Discount	0.802	0.756				
Appearance	Q1_4	Design	0.856	0.997	0.819	0.873	0.777	1.249
	Q1_8	Color	0.870	0.749				
Sustainable value	Q1_7	Brand values (e.g., sustainability, ethics)	0.838	0.77	0.795	0.868	0.687	1.349
	Q1_12	Arch support	0.580	0.87				
	Q1_15	Made from sustainable materials	0.890	0.843				
Technology and innovation	Q1_2	Brand	0.548	0.728	0.521	0.799	0.668	1.457
	Q1_6	Innovation and technology	0.573	-				
Real behaviour	Q3_1	I regularly buy running products from my favorite running brands that I trust.	-	0.679	0.752	0.859	0.672	
	Q3_2	I run with a high-quality running brand, which makes me faster.	-	-				
	Q3_3	When shopping, I choose brands that focus on quality, even if they are more expensive.	-	0.888				

Q3_4	I prefer to buy high-quality running products.	-	0.876

Source: Statistica software, SmartPLS software, own processing.

Figure 1 presents the results of the structural model, including path coefficients, p-values, and the explained variance of the endogenous construct. The effects of the individual determinants on actual consumer behaviour were assessed using PLS-SEM.

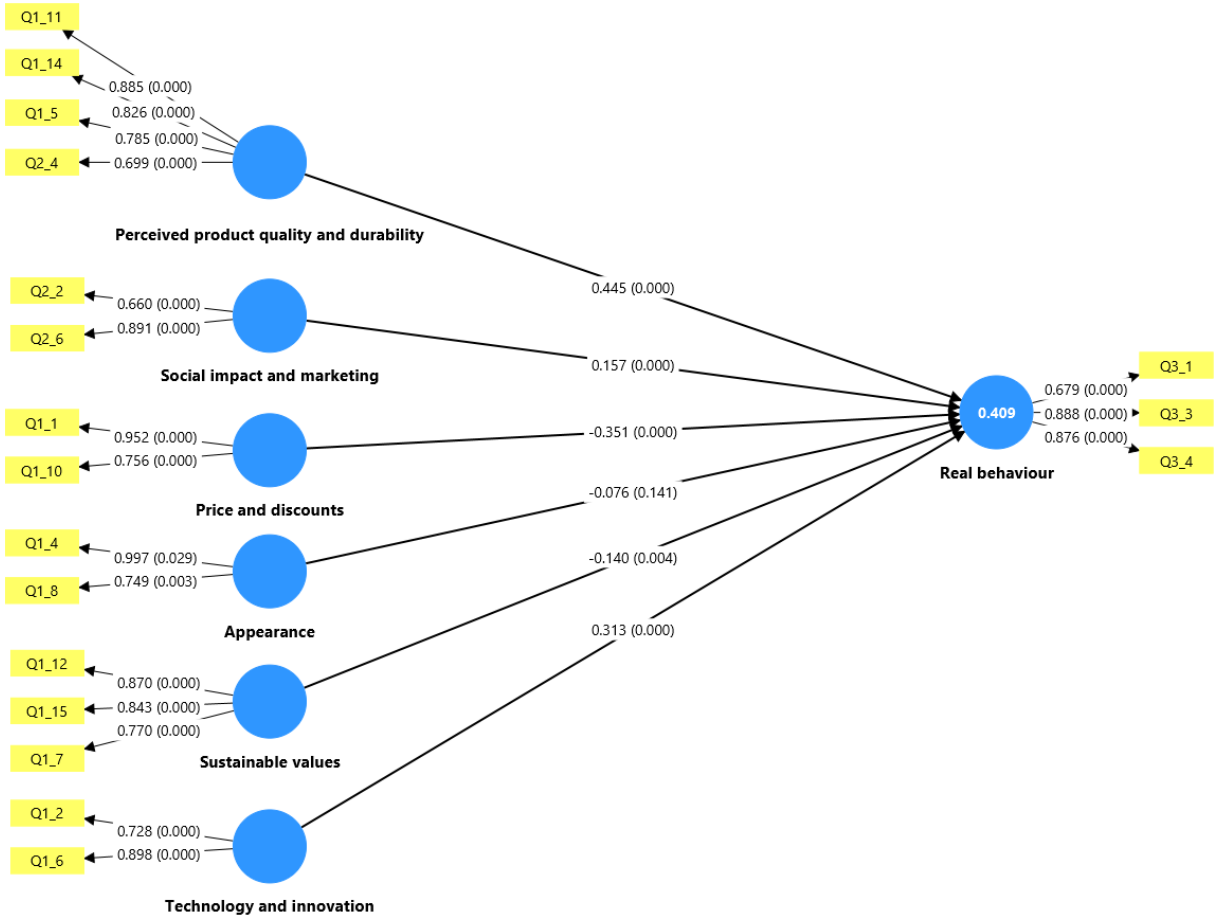

Figure 1. PLS-SEM model with marked outer loadings, path coefficients and R^2

Source: SmartPLS software (v 4.1.1.4)

Table 6 shows that perceived product quality and durability exhibits the strongest positive relationship with actual behaviour (β = 0.445, p < 0.001). Technology and innovation also demonstrate a substantial positive effect (β = 0.313, p < 0.001), followed by social impact and marketing, which shows a weaker yet statistically significant positive association (β = 0.157, p < 0.001). In contrast, price and discounts display a significant negative effect on actual behaviour (β = −0.351, p < 0.001). Sustainable values are likewise negatively related to actual behaviour, although the magnitude of the effect is smaller (β = −0.140, p = 0.004). The path from appearance to actual behaviour is negative but not statistically significant (β = −0.076, p = 0.141).

The coefficient of determination indicates that the model explains a substantial proportion of variance in actual behaviour. The R^2 value for the endogenous construct reaches 0.409 ($p < 0.001$), with an adjusted R^2 of 0.400, suggesting a moderate to strong explanatory power of the structural model. The overall model fit, assessed using the Standardised Root Mean Square Residual (SRMR), reached a value of 0.095.

Table 6: Path coefficients (β) and p-values. Results of total model effects

H		Path coefficients	P values	Rejection
H1	Perceived product quality and durability -> Real behaviour	0.445	0.000	Reject
H2	Social impact and marketing -> Real behaviour	0.157	0.000	Reject
H3	Price and discounts -> Real behaviour	-0.351	0.000	Reject
H4	Appearance -> Real behaviour	-0.076	0.141	Not reject
H5	Sustainable values -> Real behaviour	-0.14	0.004	Reject
H6	Technology and innovation -> Real behaviour	0.313	0.000	Reject

Source: SmartPLS software, own processing.

Discussion

The results of the structural model provide important insights into the determinants shaping actual purchasing behaviour of Generation Z consumers in the running products market. The findings indicate that purchase decisions within this segment are predominantly driven by product-related attributes, while marketing-based and value-oriented factors play a comparatively weaker role.

Perceived product quality and durability emerged as the strongest predictor of actual behaviour, indicating that Generation Z consumers are more likely to translate their intentions into real purchases when running products meet high expectations in terms of comfort, material quality, breathability, and long-term durability. This finding underscores the central role of functional performance and perceived reliability, which appear to outweigh symbolic or promotional considerations in this product category. The result is consistent with prior sport consumer behaviour research, which conceptualises core product quality—including functional performance attributes—as a key determinant of consumer satisfaction and behavioural outcomes in sport contexts (Yoshida, 2017). Moreover, studies on sportswear consumption suggest that utilitarian benefits closely associated with perceived quality and performance exert a significant influence on purchase intention (Lim et al., 2016). Similar conclusions are reported by Bakri et al. (2023), who found that higher perceived value and product satisfaction are positively associated with brand loyalty.

Technology and innovation also demonstrated a substantial positive effect on real behaviour. This finding reflects the importance of technological advancement and innovative product features for Generation Z, a cohort characterised by high technological awareness and openness to innovation. Technologically advanced products may enhance perceived value and reinforce trust in brand competence, thereby increasing the likelihood of purchase. The positive effect of technology and innovation identified in this study is supported by recent research emphasizing Generation Z's strong engagement with digital and technological environments, which shape their consumer expectations and behaviour (Theocharis, 2025; Maheswari et al., 2025).

Social impact and marketing showed a positive but weaker influence on actual behaviour. While external recommendations and marketing communication contribute to shaping consumer awareness and confidence, they do not appear to be decisive factors on their own. Rather, social and marketing cues seem to function as supportive mechanisms that complement product related evaluations, rather than as primary drivers of purchase behaviour. This result supports previous research suggesting that marketing communication and social influence primarily reinforce consumer confidence and brand perceptions rather than directly triggering purchase behaviour, particularly in high-involvement product categories such as sport equipment (De Veirman et al., 2017; Ki et al., 2020).

In contrast, price and discounts exhibited a significant negative relationship with actual behaviour. This indicates that lower price sensitivity is associated with a higher likelihood of purchase, suggesting that Generation Z consumers who focus less on price are more inclined to prioritise product quality, functionality, and overall performance. Price considerations therefore appear to play a secondary role once key product expectations are satisfied. The negative relationship between price sensitivity and actual behaviour is consistent with value-based consumption theories, which argue that when perceived quality and performance are high, price considerations become less influential in purchase decisions (Zeithaml, 1988; Dodds et al., 1991; Sweeney & Soutar, 2001).

Sustainable values were also negatively associated with real behaviour, although the effect size was smaller. This finding points to a potential attitude–behaviour gap, whereby sustainability and ethical considerations are acknowledged as important at an attitudinal level but are not consistently reflected in actual purchasing decisions. Rather than indicating a universal attitude–behaviour gap, this finding supports research suggesting that the influence of sustainability is highly context-dependent and tends to diminish in performance-oriented product categories, where functional requirements and product performance dominate consumer decision-making (Carrington et al., 2014; White et al., 2019; McNeill & Moore, 2015).

Finally, appearance did not exhibit a statistically significant effect on real behaviour. This suggests that aesthetic characteristics such as colour and design are not critical determinants of purchase decisions for Generation Z consumers in this product category. Prior studies suggest that in high-involvement contexts, aesthetic design is secondary to functional product attributes in shaping consumer behaviour (Bloch, 1995; Orth & Malkewitz, 2008).

Overall, the findings indicate that Generation Z consumers prioritise functional quality, durability, and technological innovation when purchasing running products, while marketing communication, price incentives, sustainability values, and visual attributes exert more limited or indirect influence. These results contribute to a more nuanced understanding of consumer behaviour in the running products.

Conclusion

This study examined the determinants of actual purchasing behaviour among Generation Z consumers in the running products market, with a particular focus on the role of sustainability within a performance-oriented consumption context. By combining factor analysis and PLS SEM, the research identified six key determinants influencing real consumer behaviour.

The findings demonstrate that purchasing decisions are primarily driven by functional product attributes, especially perceived quality, durability, comfort, and technological innovation. In contrast, sustainability-related values, although present at an attitudinal level, play a comparatively limited role in shaping actual purchasing behaviour within this product category. These results suggest that, in performance-driven sport markets, sustainability considerations tend to be secondary to functional performance requirements.

By empirically focusing on actual behaviour rather than purchase intentions, this study contributes to a more nuanced understanding of sustainable consumption among Generation Z. The results highlight the importance of contextualising sustainability within specific product categories and caution against assuming a universal impact of sustainability values across all consumption domains. Overall, the study underscores the need for brands operating in the running products market to align sustainability initiatives with tangible product performance in order to enhance their effectiveness.

Limitations

Several limitations of this study should be acknowledged. First, the research relies on self reported survey data, which may be subject to response bias and does not capture the full complexity of real-world purchasing behaviour. Although the use of PLS-SEM allows for robust analysis of latent relationships, the cross-sectional design of the study limits the ability to infer causal dynamics over

time. Second, the sample consists exclusively of Generation Z consumers from the Czech Republic. While this focus is consistent with the research objective, it restricts the generalisability of the findings to other generational cohorts, cultural contexts, or geographic markets. Consumer perceptions of sustainability and performance attributes may vary substantially across countries and sport-related consumption environments.

Finally, sustainability was operationalised through a limited set of value-oriented indicators. While this approach captures general sustainability perceptions, it does not fully reflect the multidimensional and situational nature of sustainable consumption, particularly in performance-driven product categories such as running products.

Future Research Directions

Future research could build on these findings by adopting qualitative or mixed-methods approaches to gain deeper insight into how Generation Z consumers interpret sustainability within sport-related consumption contexts. In-depth interviews or focus groups could help uncover underlying motivations, trade-offs, and contextual factors that influence the relative importance of sustainability compared to functional performance. Longitudinal studies would also be valuable in examining whether sustainability considerations become more influential over time as market offerings, technologies, and consumer awareness evolve. Additionally, future research could explore differences across sport categories, comparing performance-oriented products with lifestyle or leisure sports to assess whether the role of sustainability varies by consumption context.

Comparative cross-cultural studies may further enhance understanding by identifying how institutional, cultural, and market-specific factors shape the relationship between sustainability values and actual purchasing behaviour.

Contribution and Knowledge Gap Fulfilment

This study contributes to the existing literature by addressing a key gap between sustainability-oriented attitudes and actual purchasing behaviour within a performance-driven sport market. While prior research often assumes that sustainability values held by Generation Z directly translate into sustainable consumption practices, this study demonstrates that such relationships are highly context-dependent. By empirically examining real purchasing behaviour rather than intentions alone, the findings provide evidence that functional quality, durability, and technological performance outweigh sustainability considerations in the running products market. In doing so, the study extends

sustainability and consumer behaviour research by highlighting the importance of product category characteristics in shaping the relevance of sustainability for purchasing decisions.

Overall, the results offer a more nuanced understanding of sustainable consumption, suggesting that sustainability should not be viewed as a universal driver of behaviour, but rather as a factor whose influence depends on the functional and performance demands of the product category.

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