Determinants influencing online shopping behaviour among 18-30-year-olds in Gauteng, South Africa: an examination of pricing, quality, security, time and information availability

Determinantes que influenciam o comportamento de compras online entre jovens de 18 a 30 anos em Gauteng, África do Sul: uma análise de preços, qualidade, segurança, tempo e disponibilidade de informações

Factores determinantes que influyen en el comportamiento de compra en línea entre jóvenes de 18 a 30 años en Gauteng, Sudáfrica: un análisis de los precios, la calidad, la seguridad, el tiempo y la disponibilidad de información

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ABSTRACT
This study explores the determinants influencing online shopping behaviour among 18-30-year-olds in Gauteng, South Africa, focusing on key factors, such as pricing, quality, security, time, and information availability. Grounded in the Technology Acceptance Model (TAM) and Perceived Risk Theory, this research aims to provide a comprehensive understanding of how these factors impact consumer decisions and behaviours. A cross-sectional survey methodology was employed, targeting 1,043 respondents who have shopped online within the past six months in Gauteng. The findings reveal that all five factors significantly influence online shopping behaviour, with information availability and time efficiency showing the strongest correlations. The study also highlights that despite the high perceived convenience and satisfaction with online shopping, security concerns remain a barrier to adoption. The study suggests that online retailers should enhance their security measures, provide detailed product information, and streamline their online processes to improve customer experience and trust. The study developed a conceptual framework to identify the factors influencing online shopping behaviour among 18-30-year-olds in Gauteng. This model includes six constructs: pricing, quality, security, time, information availability, and online shopping behaviour. This framework can be applied in future research. Limitations of the study include its narrow geographic and demographic focus on the 18-30-year-old population in Gauteng, South Africa, which restrict the generalisability of findings to other age groups or regions. Additionally, the cross-sectional design provides a snapshot rather than longitudinal insights into how online shopping behaviours evolve over time.
Keywords: online shopping behaviour, technology acceptance model, perceived risk theory, consumer preferences and e-commerce.

RESUMO
Este estudo explora os determinantes que influenciam o comportamento de compras online entre jovens de 18 a 30 anos em Gauteng, África do Sul, com foco em fatores-chave, como preço, qualidade, segurança, tempo e disponibilidade de informações. Baseada no Modelo de Aceitação de Tecnologia (TAM) e na Teoria do Risco Percebido, esta pesquisa visa fornecer uma compreensão abrangente de como esses fatores impactam as decisões e comportamentos do consumidor. Uma metodologia de pesquisa transversal foi empregada, visando 1.043 entrevistados que fizeram compras online nos últimos seis meses em Gauteng. As descobertas revelam que todos os cinco fatores influenciam significativamente o comportamento de compras online, com disponibilidade de informações e eficiência de tempo mostrando as correlações mais fortes. O estudo também destaca que, apesar da alta conveniência e satisfação percebidas com as compras online, as preocupações com a segurança continuam sendo uma barreira à adoção. O estudo sugere que os varejistas online devem aprimorar suas medidas de segurança, fornecer informações detalhadas sobre os produtos e otimizar seus processos online para melhorar a experiência e a confiança do cliente. O estudo desenvolveu uma estrutura conceitual para identificar os fatores que influenciam o comportamento de compras online entre jovens de 18 a 30 anos em Gauteng. Este modelo inclui seis construtos: preço, qualidade, segurança, tempo, disponibilidade de informações e comportamento de compras online. Esta estrutura pode ser aplicada em pesquisas futuras. As limitações do estudo incluem seu foco geográfico e demográfico estreito na população de 18 a 30 anos em Gauteng, África do Sul, o que restringe a generalização das descobertas para outras faixas etárias ou regiões. Além disso, o design transversal fornece um instantâneo em vez de insights longitudinais sobre como os comportamentos de compras online evoluem ao longo do tempo.

Palavras-chave: comportamento de compras online, modelo de aceitação de tecnologia, teoria do risco percebido, preferências do consumidor e comércio eletrônico.

RESUMEN
Este estudio explora los determinantes que influyen en el comportamiento de compra en línea entre los jóvenes de 18 a 30 años en Gauteng, Sudáfrica, centrándose en factores clave, como el precio, la calidad, la seguridad, el tiempo y la disponibilidad de información. Basada en el Modelo de Aceptación de Tecnología (TAM) y la Teoría del Riesgo Percibido, esta investigación tiene como objetivo proporcionar una comprensión integral de cómo estos factores afectan las decisiones y los comportamientos de los consumidores. Se empleó una metodología de encuesta transversal, dirigida a 1.043 encuestados que habían comprado en línea en los últimos seis meses en Gauteng. Los hallazgos revelan que los cinco factores influyen significativamente en el comportamiento de compra en línea, y la disponibilidad de información y la eficiencia del tiempo muestran las correlaciones más fuertes. El estudio también destaca que, a pesar de la alta conveniencia y satisfacción percibidas con las compras en línea, las preocupaciones de seguridad siguen siendo una barrera para la adopción. El estudio sugiere que los minoristas en línea deben mejorar sus medidas de seguridad, proporcionar información detallada sobre los productos y agilizar sus procesos en línea para mejorar la experiencia y la confianza del cliente. El estudio desarrolló un marco conceptual para identificar los factores que influyen en el comportamiento de compra en línea entre los
jóvenes de 18 a 30 años en Gauteng. Este modelo incluye seis constructos: precio, calidad, seguridad, tiempo, disponibilidad de información y comportamiento de compra en línea. Este marco puede aplicarse en futuras investigaciones. Las limitaciones del estudio incluyen su estrecho enfoque geográfico y demográfico en la población de 18 a 30 años de Gauteng, Sudáfrica, lo que restringe la generalización de los hallazgos a otros grupos de edad o regiones. Además, el diseño transversal proporciona una instantánea en lugar de perspectivas longitudinales sobre cómo evolucionan los comportamientos de compra en línea con el tiempo.

Palabras clave: comportamiento de compra en línea, modelo de aceptación de la tecnología, teoría del riesgo percibido, preferencias del consumidor y comercio electrónico.

1 BACKGROUND TO THE STUDY

The rapid advancement of the Internet of Things (IoT) has significantly transformed consumer behaviour and globalised the purchasing process. The global e-commerce market is projected to exceed $6.5 trillion in sales by 2023, highlighting online shopping as a dominant force in the retail sector (Asoni, 2021). The convenience and accessibility of online shopping have attracted consumers worldwide, but several factors continue to influence its growth and success (Choi, 2018). In South Africa, there has been a noticeable increase in online shopping. This rise is driven by more internet users, the growth of e-commerce, and mobile commerce (Albertyn-Burton & Scheepers, 2017). Makhitha (2021) projects a 9% increase in South African e-commerce by 2023, with online sales comprising only 1% of the retail market, indicating substantial growth potential. However, challenges, such as security issues, logistics, delivery problems, and economic conditions can significantly impact the success of online shopping (Rai, 2021). Cybercrime poses a significant risk, with criminals targeting personal and financial data (Levi, 2017). Other risks include non-receipt of goods, counterfeit products, and value-for-money concerns (Pentz, 2020). These risks influence consumer purchasing decisions by raising concerns that potential online shoppers cannot ignore (Sajim, 2021). Delivery options, such as same-day and express shipping, also play a crucial role in the online shopping experience (Vasić, 2019). However, the perceived risks and delivery options affect the decision-making process of many potential online shoppers (Malapane, 2019). Despite extensive research on online shopping globally, there is limited information on specific geographic areas like Gauteng, South Africa, and particular demographics, such as the 18-30 age group. Gauteng, with a high number of student migrants, offers a unique
context for studying online shopping behaviour. Understanding gender differences in online shopping can also help businesses better target and serve their customers. The primary objective of this research is to evaluate the factors influencing online shopping in Gauteng, with an emphasis on pricing, quality, security, time and information availability. Additionally, the study aims to identify which attributes contribute most to online shopping behaviour, considering factors like purchase frequency and demographic differences.

2 LITERATURE REVIEW

2.1 THEORIES GROUNDING THE STUDY

The research on determinants influencing online shopping can be understood through the technology acceptance model (TAM) and the perceived risk theory. The research objectives aligned well with these theories. This study utilised TAM to explore how convenience and ease of access influence consumer acceptance of online shopping. In addition, the perceived risk theory explores how privacy and financial security as perceived risks impact consumer decisions and behaviours in the context of online shopping. Thus, these theories provide a comprehensive framework for analysing factors influencing online shopping behaviours and guide strategies to enhance consumer adoption and satisfaction in the e-commerce sector.

2.2 TECHNOLOGY ACCEPTANCE MODEL

TAM, developed by Davis in 1989, posits that perceived usefulness (PU) and perceived ease of use (PEOU) are the primary factors determining technology acceptance. PU refers to the degree to which a person believes that using a particular system would enhance their job performance (Lee, Hsieh & Ma, 2011). PEOU indicates the degree to which a person believes that using a system would be free of effort (Abdullah, Ward & Ahmed, 2016). TAM helps explain how the convenience of online shopping influences consumer acceptance and usage of e-commerce platforms. The more useful and easy-to-use consumers find the online shopping platforms, the more likely they are to adopt them for their shopping needs.
2.3 PERCEIVED RISK THEORY

Perceived risk theory is a framework for understanding online shopping behaviour. This theory addresses the potential risks consumers perceive when making purchases, especially in an online environment where physical inspection of products is not possible (Li & Huang, 2009). Common risks include financial risk, product risk and performance of the product, privacy risk and delivery risk. Perceived risks significantly impact consumer behaviour and purchasing decisions (Maciejewski, 2012). Consumers' concerns about security, product authenticity, and transaction safety are critical factors that influence their willingness to shop online. The theory helps in understanding how these perceived risks create barriers to online shopping adoption and how addressing these risks can enhance consumer confidence and promote online shopping.

2.4 JUSTIFICATION FOR ADOPTING THEORIES TO THE STUDY

The integration of TAM and Perceived Risk Theory provides a comprehensive framework for this study which offer a holistic view of the factors influencing on-line shopping behaviour. Combining TAM and Perceived Risk Theory allows the study to balance the positive aspects like convenience and ease of use with the potential negative aspects like perceived risks of online shopping. This balanced approach ensures a more thorough understanding of consumer behaviour. Applying these theories to the specific context of South Africa and focusing on the 18-30 age group provides tailored insights that can inform local businesses and policymakers. This context-specific approach ensures that the findings are relevant for improving the online shopping experience in the region.

2.5 E-COMMERCE TRENDS IN SOUTH AFRICA

The growth of online shopping in South Africa is driven by increasing technology availability (Pentz, 2020). Globally, online shopping has expanded rapidly as more consumers choose to purchase goods and services online (Gu, 2021). As a key aspect of e-commerce (Nguyen, 2018), it has transformed retail by offering greater convenience, choice, and accessibility (Bertram & Chi, 2018). Commerce in South Africa has seen significant growth, with 22 million online shoppers (37% penetration rate) in 2020 and
an anticipated 32 million (44% penetration) by 2024 (Deloitte, 2021). E-commerce is part of the broader digital transformation in South Africa, expected to reach $7.9 billion by 2027, up from $4.5 billion in 2021 (Research & Markets.com, 2024). Pajic et al. (2023) predicted a 10% annual growth in online sales, contributing 20-25% of global retail sales. Online transactions use electronic technologies like the internet, mobile devices, and electronic payment systems (Kwilinski, 2019). Online shopping saves time by eliminating the need to travel to traditional stores (Cuna, 2020).

2.6 DETERMINANTS INFLUENCING ON-LINE SHOPPING

2.6.1 Pricing

Pricing is a key factor in online shopping behaviour. Consumers prefer online shopping if prices are more competitive than in-store (Pandey, 2019). Discounts, promotions, and loyalty programs enhance perceived value (Bucko, 2019; Hasan, 2022). The ease of price comparison online increases competition, potentially lowering prices, while dynamic pricing adjusts costs based on demand and consumer behaviour, causing fluctuations (Giao, 2020). Lower operational costs for online retailers can also lead to lower prices (Rita, 2019). Consumer ratings and reviews can further influence pricing adjustments based on perceived value (Giao, 2020). Therefore, it is hypothesised that:

H1: Pricing impacts online shopping behaviour.

2.6.2 Quality

The quality of products significantly influences online shopping behaviour. Consumers often perceive online purchases as riskier than in-store ones due to concerns about product quality (Hasan, 2022). To build trust, online retailers must provide detailed product information. User-generated content, such as reviews and ratings, plays a crucial role in shaping consumer perceptions of product quality (Sinurat, 2021). Clear product descriptions, specifications, and multimedia presentations like images and videos help set accurate quality expectations (Wibowo, 2020). Additionally, the growing preference for ethically sourced and sustainable products affects consumer choices (Wibowo, 2020). The presence of counterfeit goods in online markets underline the importance of verifying product authenticity and seller credibility (Rita, 2019). Therefore, it is hypothesised that:
H2: Quality impacts online shopping behaviour.

2.6.3 Security

Security is a significant concern in online shopping behaviour. Ensuring website security and protecting customers' personal and financial data are crucial for online retailers (Hasan, 2022). Security breaches, such as unauthorised access to credit card information, can undermine consumer trust and deter online shopping (Türk, 2019). Therefore, it is hypothesised that:

H3: Security impacts online shopping behaviour.

2.6.4 Time

Time efficiency is crucial in online shopping behaviour. Customers are more inclined to make purchases online if the process is more convenient than shopping in person (Wang, 2023). This includes having a user-friendly website with easy navigation and a streamlined checkout process. These factors contribute to cost savings and enhance the ease of price comparison online. Therefore, it is hypothesised that:

H4: Time impacts online shopping behaviour.

2.6.5 Information availability

The availability of product information significantly influences online shopping behaviour. Online retailers must provide accurate and comprehensive product details to build consumer confidence (Rita, 2019). Detailed and precise product information enhances the online shopping experience, particularly for products consumers cannot physically inspect (Mbete, 2020). Descriptions and visual content like images and videos play a crucial role in helping consumers assess product suitability and quality (Bucko, Kakalejčík & Ferencová, 2018). These elements bridge the gap between virtual shopping and physical product experiences, enabling informed decision-making. Therefore, it is hypothesised that:

H5: Information availability impacts online shopping behaviour.
2.6.6 Online shopping behaviours

Online shopping in the digital age has revolutionised consumer behaviour through dynamic pricing and easy price comparisons, influencing perceptions of value and purchase decisions (Nguyen, 2020). With limited physical access to products, reliance on customer reviews, brand reputation, and transparent product information has grown (Rita, 2019). Comprehensive product descriptions, appealing visuals, and user feedback are crucial for shaping accurate expectations and informed choices online (Sinurat, 2021). Trust and credibility are paramount in e-commerce, where consumers rely heavily on information, reviews, and brand reputation due to the absence of physical product interaction (Giao, 2020; Wang, 2023). Transparency and authenticity are critical; any discrepancies can erode trust and drive customers away (Hasan, 2022). Social media and influencers play a significant role in shaping consumer preferences and purchasing decisions, with social proof gaining importance (Bucko, 2018; Daroch, 2021). In summary, online shopping behaviours are shaped by dynamic pricing, information transparency, trust in brands, and social influence, all of which are pivotal in navigating a marketplace fraught with choices and counterfeit risks.

2.7 HYPOTHESES DEVELOPMENT

The hypotheses developed in this study focus on understanding the factors influencing online shopping behaviour among 18-30-year-olds in Gauteng, South Africa, as depicted in Figure 1. The conceptual framework identifies six constructs: pricing, quality, security, time efficiency, information availability, and online shopping behaviour. The model illustrates direct relationships among these variables, forming a structured approach to explore and validate how each factor influences online shopping behaviour in this demographic. These hypotheses collectively aim to provide insights into the specific drivers and barriers shaping consumer behaviour in the context of e-commerce in Gauteng, South Africa. The hypothesis is summarised as follows:

H₁: Pricing has an impact on online shopping behaviour.
H₂: Quality has an impact on online shopping behaviour.
H₃: Security has an impact on online shopping behaviour.
H₄: Time has an impact on online shopping behaviour.
H₅: Information availability has an impact on online shopping behaviour.
2.8 RESEARCH METHODS

This study adopts a positivist research philosophy to assess factors influencing shoppers' experiences in online shopping. A quantitative approach using a cross-sectional survey was employed, focusing on Gauteng residents who have purchased online in the past six months. These respondents were between the ages of 18 and 30. The population size targeted 1,043 respondents, selected through simple random sampling to ensure representation. Data collection utilised structured questionnaires administered via electronic surveys. The study found that 59.1% of respondents were female and 40.6% were male, with a small fraction identifying otherwise (0.3%). This aligns with Nhlapulo and Makhitha's (2021) suggestion that females are more inclined to participate in online shopping. Age also played a significant role, with respondents ranging from 18 to 30 years old, averaging 24 years. Educational background showed that 29.4% had tertiary qualifications, followed by 25.6% with undergraduate degrees, and others with certificates or diplomas.
2.9 RELIABILITY ANALYSIS

The study assessed the reliability of the measurement scale using the Cronbach's alpha. Cronbach's alpha values above 0.7 are considered acceptable for reliability in research. Results of reliability test are shown in Table 1.

Table 1: Reliability statistics

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Cronbach’s alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pricing</td>
<td>0.860</td>
</tr>
<tr>
<td>Quality</td>
<td>0.788</td>
</tr>
<tr>
<td>Time</td>
<td>0.855</td>
</tr>
<tr>
<td>Security</td>
<td>0.877</td>
</tr>
<tr>
<td>Information availability</td>
<td>0.873</td>
</tr>
<tr>
<td>Online shopping behaviour</td>
<td>0.911</td>
</tr>
</tbody>
</table>

Source: Author (2024)

In Table 1, results indicate that all constructs have good internal consistency, suggesting that the measuring items used to measure these constructs are reliable in capturing the aspects of online shopping behaviour. Thus, researchers can have confidence that the responses are consistent and reliable within each construct measured.

2.10 PERCEPTIONS OF CONSUMERS ON ONLINE SHOPPING

Respondents were asked to indicate the perceptions they have on online shopping. Perceptions of online shopping refer to the attitudes, beliefs, and opinions that consumers hold regarding the experience of purchasing goods or services over the internet (Al-Debei, Akroush & Ashouri, 2015). Results of perceptions of consumers on online shopping are presented in Table 2.

Table 2: Perceptions of consumers on online shopping

<table>
<thead>
<tr>
<th>Code items</th>
<th>Indicator short description</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>B.1</td>
<td>I am satisfied that websites offer online purchasing options.</td>
<td>4.05</td>
</tr>
<tr>
<td>B.2</td>
<td>I would recommend online shopping to other consumers.</td>
<td>4.06</td>
</tr>
<tr>
<td>B.3</td>
<td>I enjoy online shopping.</td>
<td>4.05</td>
</tr>
<tr>
<td>B.4</td>
<td>It is my opinion that online shopping is excellent.</td>
<td>4.01</td>
</tr>
<tr>
<td>B.5</td>
<td>I will frequently shop online in the future</td>
<td>4.14</td>
</tr>
</tbody>
</table>

Source: Author (2024)

In Table 2, five measuring items, from B.1 to B.5 were considered. The mean rating ranged from between 4.01 and 4.14. Overall, the results indicate highly favourable
perceptions of consumers towards online shopping. They are satisfied with the availability of online purchasing options, find the process interesting, and enjoy shopping online. They perceive online shopping as excellent and are likely to recommend it to others. Importantly, there is a strong intention among consumers to continue shopping online in the future, highlighting the sustained popularity and growth potential of online retail platforms.

2.11 CORRELATION BETWEEN FACTORS INFLUENCING ONLINE SHOPPING AND ONLINE SHOPPING BEHAVIOUR

The correlation between factors influencing online shopping and online shopping behaviour involves understanding how various factors affect a consumer's decision to shop online and their overall online shopping habits. Prior to conducting the multiple regression analysis, correlation analysis was performed to assess the relationships between variables, as detailed in Table 3.

<table>
<thead>
<tr>
<th></th>
<th>Online shopping behaviour</th>
<th>Information availability</th>
<th>Time</th>
<th>Security</th>
<th>Quality</th>
<th>Pricing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online shopping</td>
<td>1000</td>
<td>.668</td>
<td>.645</td>
<td>.141</td>
<td>.599</td>
<td>.501</td>
</tr>
<tr>
<td>behaviour</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Information</td>
<td>1000</td>
<td>.610</td>
<td>.213</td>
<td>.569</td>
<td>.471</td>
<td></td>
</tr>
<tr>
<td>availability</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time</td>
<td>1000</td>
<td>.216</td>
<td>.542</td>
<td>.542</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Security</td>
<td>1000</td>
<td>.274</td>
<td>.192</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality</td>
<td>1000</td>
<td>.590</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pricing</td>
<td>1000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Author (2024)

In Table 3, the correlation matrix indicates insights into factors influencing online shopping behaviour. Online shopping behaviour shows strong correlations with information availability ($r = 0.668$), time ($r = 0.645$), quality ($r = 0.599$), and pricing ($r = 0.501$), indicating that changes in these variables are likely to coincide with changes in shopping behaviour. Information availability correlates strongly with time ($r = 0.610$) and moderately with quality ($r = 0.569$), suggesting that the availability of information influences the time spent on shopping decisions and perceived quality. Time correlates strongly with both information availability ($r = 0.610$) and quality ($r = 0.542$), indicating that efficient use of time and perceived quality are interconnected in online shopping
experiences. Security shows a moderate correlation with quality (r = 0.274) but weaker associations with other variables, suggesting a less pronounced influence on overall shopping behaviour. Quality demonstrates a moderate correlation with pricing (r = 0.590), highlighting its role in influencing price perceptions in online shopping contexts.

2.12 MULTIPLE REGRESSION MODEL

According to Rubinfeld (2000), a multiple regression model is a statistical technique used to understand the relationship between one dependent variable and two or more independent variables. Table 4 displays the results of a regression analysis with online shopping behaviour as the dependent variable and five predictors: pricing, quality, time, security, and information availability. The resultant simple multiple regression model is presented in Table 4.

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R²</th>
<th>Adjusted R²</th>
<th>Std error of the estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.753</td>
<td>.567</td>
<td>.565</td>
<td>.46595</td>
</tr>
</tbody>
</table>

Note: a. Predictors: (constant), pricing, quality, time, security and information availability.

b. Dependent variable: On-line shopping behaviour.

Source: Author (2024)

In Table 4, the value of multiple correlation coefficient (R) is 0.753 which indicates a strong positive correlation between the predictors (pricing, quality, time, security, and information availability) and the dependent variable (online shopping behaviour). A value closer to 1 implies a strong relationship. The coefficient of determination (R²) is 0.567 indicates that approximately 56.7% of the variance in online shopping behaviour can be explained by the predictors included in the model. An adjusted R² of 0.565 suggests that, after adjusting for the number of predictors, 56.5% of the variability in online shopping behaviour is still explained by the model. A standard error of 0.46595 means that, on average, the predicted online shopping behaviour values deviate from the actual values by approximately 0.46595 units. A smaller standard error indicates a better fit of the model to the data.
2.13 ANALYSIS OF VARIANCE FOR PREDICTORS OF ONLINE SHOPPING BEHAVIOUR

The analysis of variance (ANOVA) tested whether the predictors, pricing, quality, time, security, and information availability, collectively have a statistically significant impact on online shopping behaviour. This was done to assess the overall significance of the predictors in explaining the variability in the dependent variable, which is online shopping behaviour. Table 5 presents the results of analysis of variance.

Table 5: Analysis of variance

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of squares</th>
<th>df</th>
<th>Mean square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>295,933</td>
<td>5</td>
<td>59.187</td>
<td>272.611</td>
<td>&lt;.000b</td>
</tr>
<tr>
<td>Residual</td>
<td>225,578</td>
<td>1039</td>
<td>.217</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>521,512</td>
<td>1044</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: a. Predictors: (constant), pricing, quality, time, security and information availability.  
   b. Dependent variable: On-line shopping behaviour.  
Source: Author (2024)

In Table 5, the regression model explains a significant portion of the variability in online shopping behaviour, as indicated by the high F-value (272.611) and the very low p-value (Sig. < .000). The predictors (pricing, quality, time, security, and information availability) together have a statistically significant effect on online shopping behaviour. Most of the variability in online shopping behaviour is explained by the predictors (295,933 out of 521,512), with a smaller portion being unexplained (225,578). Overall, the regression analysis shows that the model is highly significant and that the predictors collectively have a substantial impact on online shopping behaviour.

3 DISCUSSION AND CONCLUSION

The study aimed to explore the determinants influencing online shopping behaviour among 18-30-year-olds in Gauteng, South Africa. The research focused on pricing, quality, security, time, and information availability as primary factors affecting online shopping decisions. The study hypotheses that there is a positive effect of pricing on online shopping behaviour. The study confirms that pricing significantly influences online shopping behaviour. Competitive pricing, discounts, promotions, and the ability to
easily compare prices online enhance perceived value, driving consumers towards online shopping (Lee, 2020). Hypothesis H2 predicted a positive effect of quality on online shopping behaviour. It was established that product quality is a critical factor in online shopping decisions. Detailed product information, user reviews, and ratings help build trust and reduce perceived risks associated with purchasing online (Baek, Ahn & Choi, 2021). The presence of counterfeit products highlights the need for verifying authenticity and credibility of sellers. Hypothesis H3 predicted a positive effect of security on online shopping behaviour. It was found that security concerns, including data privacy and financial safety, are significant barriers to online shopping. Ensuring robust security measures and protecting customer information are essential for building consumer trust (Roy, Balaji & Sadeque, 2021). Hypothesis H4 predicted a positive effect of time on online shopping behaviour. Results indicate that time efficiency is crucial in online shopping. Consumers value the convenience and ease of use provided by online platforms, including user-friendly interfaces and streamlined checkout processes (Kim, Forsythe, Gu & Moon, 2020). Hypothesis H5 predicted a positive effect of information availability on online shopping behaviour. It was established that the availability of comprehensive and accurate product information significantly influences online shopping behaviour. Detailed descriptions, images, and videos help bridge the gap between physical and virtual shopping experiences, enabling informed decisions (Dang & Pham, 2021).

In conclusion, this study highlighted that online shopping behaviour among 18-30-year-olds in Gauteng is significantly influenced by pricing, quality, time, security, and information availability. Consumers are attracted to competitive pricing and high-quality products. Discounts, promotions, and clear product descriptions help in building trust and encouraging online purchases. Time efficiency and the availability of detailed product information are crucial for enhancing the online shopping experience. These factors reduce the perceived risks and make the shopping process more convenient and reliable. While security concerns exist, they are not the most critical factor but still essential for building and maintaining consumer trust. The study suggests that online retailers in Gauteng should focus on providing competitive prices, ensuring high product quality, enhancing the availability of comprehensive product information, and ensuring robust security measures to attract and retain young consumers. These insights can help businesses and policymakers in South Africa improve the online shopping environment and tap into the growth potential of e-commerce.
4 THEORETICAL IMPLICATIONS

The findings provide significant theoretical implications, particularly within the frameworks of the Technology Acceptance Model (TAM) and Perceived Risk Theory. Regarding TAM, the research affirms that perceived usefulness and ease of use are pivotal in influencing online shopping behaviour, thus emphasising factors like time efficiency and information availability. Moreover, integrating TAM with e-commerce-specific factors such as pricing and quality expands its applicability, advocating for a more inclusive model. Concerning Perceived Risk Theory, the study underlined the role of security alongside other dimensions like product quality and information accuracy in shaping consumer decisions. This multidimensional view highlights the need for comprehensive risk management strategies in e-commerce. By synthesizing TAM and Perceived Risk Theory, the study presents a balanced perspective that acknowledges both the positive impacts of convenience and usability and the negative influences of perceived risks, crucial for devising targeted strategies. The study developed a conceptual framework to identify the factors influencing online shopping behaviour among 18-30-year-olds in Gauteng. This model incorporates six constructs: pricing, quality, security, time, information availability, and online shopping behaviour. This conceptual framework can be utilised in future research.

4.1 PRACTICAL IMPLICATIONS

The study suggests several practical implications for enhancing e-commerce operations. Online retailers can boost competitiveness through dynamic pricing strategies and attractive promotions to appeal to price-sensitive consumers. This study emphasises product quality with detailed information, user-generated content, and stringent quality assurance measures which help in building consumer trust. Improving security with secure payment systems and transparent privacy policies enhances trust in online transactions. Optimising efficiency through user-friendly interfaces and streamlined checkout processes can reduce shopping time and cart abandonment rates. Policymakers are recommended to enforce consumer protection regulations and support e-commerce infrastructure development to sustain sector growth.
4.2 LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

The limitations of study include its geographic scope, focusing solely on Gauteng, South Africa, which may not fully represent online shopping behaviours in other regions with different socio-economic and cultural contexts. Additionally, it is restricted to the 18-30 age group, limiting generalisability across different age demographics. The cross-sectional design used prevents causal inference, and reliance on self-reported data may introduce biases. The study also overlooks factors like social influence and technological literacy. Future research should expand geographically, encompassing diverse regions and countries, and include broader age groups to enhance generalisability. Longitudinal studies could reveal how online shopping behaviours evolve over time amidst technological advancements. Incorporating experimental designs could clarify causal relationships, while investigating emerging technologies' impacts and consumer segmentation would provide deeper insights. Additionally, exploring the influence of social media and regulatory policies on online shopping behaviour, and examining factors contributing to consumer satisfaction and loyalty, are crucial for shaping future e-commerce strategies.
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