

The NULL pointers

According to Puala Gilbert [1], individuals have been shopping online more since 2019 than they have been physically visiting stores to pick up their purchases, and by 2023, online retail sales “reached R71 billion (US\$3.8 billion)”. This transformation occurred as a result of individuals finding that using smartphones and the internet to purchase products was far more convenient and affordable than wasting petrol and diesel to travel to stores. Most users prefer websites that are easy to use and have a layout that appeals to them. Customers also like retailers who offer quick returns or same-day delivery, such as the company Takealot, where you can pay more to have the advantage of receiving the products sooner.

Price comparison tools are websites or apps that collect product information from different online stores and display it in one place. This allows shoppers to easily compare prices, customer ratings and seller options for the same product. These tools are helpful for both consumers, who want to find the best deals, and retailers, who use them to track competitors and alter their pricing strategies to stay competitive. Some popular platforms include Google Shopping, CamelCamelCamel, and Honey. These tools present product data in a comparable format and include features like price history tracking, filtering by seller or shipping option, and even alert notifications for price drops. According to Abdul Rehman [2], over 10 million adults use such tools before making a purchase, highlighting their growing role in modern e-commerce. However, these tools are only effective if they provide accurate, up-to-date results without bias.

According to Statista [3], the top 5 online shopping categories in 2024 were electronics, fashion, food, beverages and DIY hardware items. This measurement statistic is based on consumer spending and provides a good insight on what items are popular in the industry. In the field of e-commerce the leading giant company/retailer is Amazon. Amazon had 6 billion visits to its website in the first quarter of 2024. Taobao is the leading e-commerce retailer in asia. More locally [Takealot.com](https://www.takealot.com) and SHEIN are the most popular online shops in South Africa [4]. The e-commerce industry is growing exponentially in South Africa based on the amount of users having access to the internet in the country. Makro is an example of a physical-hybrid retailer. Makro started out as a physical store but due to the rise of the e-commerce industry Makro has followed the trend and has developed an app and set up the necessary supply chain to open the channel for e-commerce [5]. These companies provide good examples on systems that work in the e-commerce industry.

User experience plays a role in the success of e-commerce websites and price comparison platforms as it impacts how users interact with these services. A well-designed platform with easy to use navigation, fast loading times and good filtering options improves the shopping experience which makes it easy for customers to find products that match the desired needs of the user . Accessibility also ensures that users across varying devices that have different technological capabilities can access the same platforms with standardised efficiency, Personalised recommendations, detailed product categorization and product suggestions help guide users toward relevant products efficiently which improves the user experience according to Denitsa Kostove [6]. Feedback from users who have used the website and its offered products such as star ratings and user reviews provide social proof which can influence the users purchasing decisions, this creates a sense of credibility which encourages repeated visits from users, therefore UX retains users and provides favoring over websites which do not prioritise UX. Poor UX design, such as slow response times or confusing navigation, can frustrate users and lead them to abandon their products before completion. This is the most common topic in non-buyer behaviour, commonly referred to as cart abandonment according to Rein Suadamara [7].

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