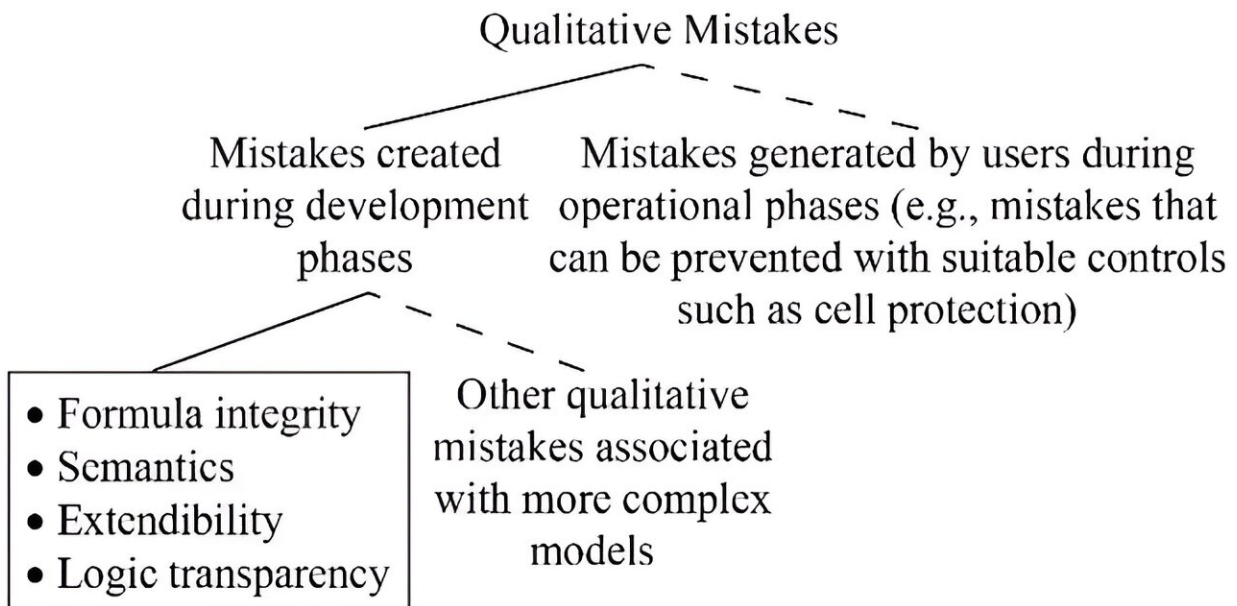# Study finds 94% of business spreadsheets have critical errors

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Taxonomy of qualitative mistakes created during spreadsheet development. Credit: *Frontiers of Computer Science* (2024). DOI: 10.1007/s11704-023-2384-6

A recent study has found that 94% of spreadsheets used in business decision-making contain errors, posing serious risks for financial losses and operational mistakes. This finding highlights the need for better quality assurance practices.

The study, led by Prof. Pak-Lok Poon in collaboration with Central

Queensland University, Swinburne University of Technology, City University of Hong Kong, and The Royal Victorian Eye and Ear Hospital, shows that most spreadsheets used in important business applications have errors that can affect decision-making processes. "The high rate of errors in these spreadsheets is concerning," says Prof. Poon.

Errors in spreadsheets can lead to poor decisions, resulting in [financial losses](), pricing mistakes, and operational problems in fields like health care and nuclear operations. "These mistakes can cause major issues in various sectors," adds Prof. Poon.

Spreadsheets are crucial tools in many fields, such as linear programming and neuroscience. However, with more people creating their own spreadsheets without formal training, the number of faulty spreadsheets has increased. "Many end-users lack proper software development training, leading to more errors," explains Prof. Poon.

The research team reviewed studies from the past 35.5 years for journal articles and 10.5 years for conference papers, focusing on [spreadsheet]() quality and related techniques across different fields.

The study found that most research focuses on testing and fixing spreadsheets after they are created, rather than on early development stages like planning and design. This approach can be more costly and risky. Prof. Poon emphasizes the need for more focus on the early stages of spreadsheet development to prevent errors.

The study suggests that adopting a life cycle approach to spreadsheet quality can help reduce errors. Addressing quality from the beginning can help businesses lower risks and improve the reliability of their decision-making tools.

The research also highlights gaps in current quality assurance practices

and recommends further studies on early development stages. It suggests better training and tools for end-users to improve spreadsheet reliability.

This review, published in *Frontiers of Computer Science*, provides a comprehensive overview of spreadsheet quality assurance and underscores the importance of early-stage quality checks.