It explores the cultural, economic, and regulatory factors shaping safety practices, challenges. From stringent regulations in developed economies to resource constandscape of industrial safety varies significantly.

Cultural and socioeconomic factors: Cultural attitudes towards safety and economic disparities play a signi cant role in shaping industrial safety practices. In some regions, there may be a lack of awareness or prioritization of safety measures due to competing socioeconomic priorities [6].

Supply chain complexity: e globalization of supply chains has increased the complexity of ensuring safety standards throughout the production process. Subcontracting and outsourcing practices can create gaps in oversight, making it challenging to maintain uniform safety protocols across borders.

Emerging risks and technologies: Rapid technological