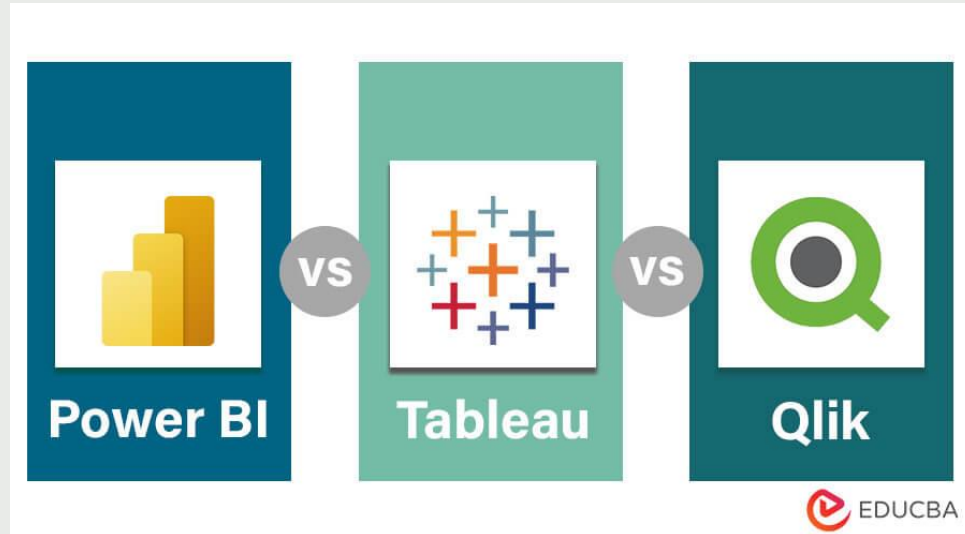


Comparative Analysis of Bi Tools: Power BI, Tableau, and Qlik

By: Chris Dybas



Research Topic

A comparative analysis of business intelligence tools (Power BI, Tableau, Qlik) focusing on visualization abilities, integration, scalability, security, and the cost of each tool.

Research Questions:

- What are the strengths and weaknesses of Power BI, Tableau, and Qlik?
 - How do these tools compare in terms of key features like visualization, integration, scalability, user interface, cost, and security?
 - Which tool is best suited for different organizational needs?
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Subtopic

Visualization Abilities:

How each tool presents and displays data.

Cost:

Pricing models and the overall cost efficiency.

Integration Options:

Compatibility with other sources of data and other software.

Security Features:

































Data protection and privacy measures

Scalability:

How well each tool handles growing data volumes and user demands

User Interface:

Ease of use for user and administrators

Power BI vs Tableau vs Qlik Sense Quick Comparison by Polestar			
Features	 Power BI	 + a b l e a u	 Qlik
Owned by	Microsoft	Salesforce	Qlik
 Data Visualization		 Best	
 Data Connectivity	 Best	 Best	
 Data Querying			
 Data Management - ETL			 Best
 Data Security			
 Natural language Processing	 Best		 Best
 Ease of learning	 Best		
 Free Version	Power BI Desktop	Tableau Public	Qlik Sense Cloud

www.polestarllp.com

Focus: To evaluate on how each BI tool meets the different needs of businesses of different sizes and the needs of various industries.

Research Method:

Methodology:

Data Collection:

- Review of literature and user reviews, along with vendor reports
- Case studies of organizational tools

Evaluation Criteria:

- Analyze user feedback and expert opinions in order to assess the overall performance of each tools
 - Analyze each tool of security, scalability, cost, and visualization
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Key findings

- Visualization: Power BI offers integration with other Microsoft products and offers various in depth ways to visualize the data, while Qlik also offers interactive dashboards
- Integration: Power BI and Tableau are able to operate with a wide range of data sources while Qlik integrates well with complex enterprise systems.

- Scalability: Tableau is efficient at scaling for large dataset, but Qlik outperforms Tableau when it comes to the real time data processing for massive volumes of data
- Cost: Power BI is the most cost effective, which is followed by Qlik as they offer a lot of flexibility at a high price. Tableau is the most expensive but has premium features.
- Security: All three tools have great security features but Qlik offers the best features for enterprise protection abilities, and Power BI works with Microsoft security features.

	Power BI	Qlik Sense	Tableau	Data Flair
	Power BI	Qlik Sense	Tableau	
Visualization Capabilities	Easy-to-use Platform	Self-service Analytics Tool	Perfect Graphics and Visualization Capabilities	
Advances Analytics Capabilities	Supports R Language-Based Visualizations	Does not support R or Python-based objects.	Provides fully integrated support for R and Python	
Cloud Capability	Compatible with Microsoft Azure	Offers a SaaS cloud product	Compatible with robust cloud platforms like, Azure, AWS etc	
Big Data Integration	Places the solution above Tableau and Qlik	Lets you access and manage all your data, big and small, within a single environment	Connect to nearly any data repository, ranging from MS Excel to Hadoop clusters	
Storage Limits	10GB cloud storage	500GB of cloud storage	100GB data storage	

Answers to Research Questions

- Power BI is best suited for small to medium sized businesses that already are already incorporated with or use the Microsoft ecosystems.
- Tableau is best for companies that requires advanced visualization of data.
- Qlik is most suitable for large enterprises that have complex data need.
- Overall the best tools is dependent upon the needs of and the size of the organization.

Significance and Implications To Business Managers

- Business managers need to take into account the cost, scalability, and integration needs of their company when choosing a BI too.
 - Managers in data-heavy industries might prefer Qlik's scalability while managers in a smaller organization might prefer the cost of Power BI
 - Being able to understand the tools strengths and weaknesses can help a business to better optimize there BI investment and to improve their decision making capabilities.
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