**Walmart and Amazon Retail Industry Data Analysis**

**Introduction:**

The retail sector is known for its intense rivalry, thus success in this field depends on knowing the tactics used by the big competitors. This proposal would concentrate on the retail sector and undertake a thorough examination of the price and product selection tactics used by Amazon and Walmart, the two major players in the market. The dataset was supplied by Saturn Data and was taken from the AWS Marketplace (May 2023).

**Dataset:**

The dataset was acquired from AWS Marketplace and provided by Saturn Data. It contains detailed information on over 6,000 products for both retailers, including product names, URLs, current prices, scores, department, and category for both Walmart and Amazon products of the month May-2023.

**Link**: [https://aws.amazon.com/marketplace/pp/prodview-ugrflimonfwog?sr=0-3&ref\_=beagle&applicationId=AWSMPContessa#dataSets](https://aws.amazon.com/marketplace/pp/prodview-ugrflimonfwog?sr=0-3&ref_=beagle&applicationId=AWSMPContessa%23dataSets)

**Market Problem:**

Our research aims to address the following marketing problems:

a. **Pricing Strategy**: Examine how both businesses charge for their goods in relation to one another. Determine trends, variances, and price patterns across several departments and product categories.

a. **Product Assortment**: Examine how Walmart and Amazon's product selections differ and overlap. Recognize the departments and product areas that each organization focuses on.

c. **Competitive Analysis**: Learn about Walmart and Amazon's competitive environment, emphasizing their advantages and disadvantages.

**Research Approach**:

To address the marketing problems, we will undertake the following steps:

a. **Data Preprocessing**: To guarantee data quality, clean and prepare the dataset. This involves organizing items by department and category, standardizing product names, and resolving missing data.

b. **Exploratory Data Analysis (EDA)**: To find patterns and trends in scores, product assortment, and price, conduct a thorough EDA. We'll make use of clustering analysis, data visualizations, and descriptive statistics.

c. **Statistical Analysis**: Run statistical analyses to see if Walmart and Amazon's product selection and prices differ significantly from one another. Regression analysis and hypothesis testing may be used in this.

d. **Competitive Landscape Visualization**: Make use of methods such as Porter's Five Forces analysis or market maps to visualize the competitive landscape.

**Project Goals:**

The project aims to accomplish the following objectives:

a. **Determine Pricing Patterns**: Learn about the product prices at Walmart and Amazon, as well as whether any clear pricing tactics exist.

b. **Product Assortment Insights**: Recognize how each business arranges its departments and product categories.

c. **Competitive study**: Give a thorough study of the competitors, pointing out their advantages and disadvantages.

d. **Data-Based Suggestions**: Make use of the information to provide shops and e-commerce companies looking to take on Amazon and Walmart with data-driven suggestions.