Executive Report: Data-Driven Growth Strategy for Klyre (2022–2025)

Turning e-commerce data into strategic business value

KLYRÉ

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A. Executive Summary

This report presents a strategic overview of Klyre's e-commerce performance from 2022 to 2025, based on 30,000 randomly sampled transactions. The objective is to identify key performance trends, customer behavior, and business opportunities that can drive growth and efficiency across sales, marketing, product, and operations.

B. Introduction

The rapid expansion of global e-commerce between 2022 and 2025 has transformed how businesses engage with customers, manage products, and allocate marketing resources. As online competition intensifies, companies like Klyre must rely on data-driven strategies to remain competitive and scale sustainably.

This report analyzes 30,000 randomly sampled transactions over a four-year period to uncover patterns in customer behavior, product performance, traffic sources, and geographic demand. Through this analysis, we aim to support strategic decision-making across marketing, operations, and inventory management, ensuring that Klyre continues to grow profitably while optimizing efficiency.

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D. Business Objective

To extract actionable insights from Klyre's multi-year e-commerce data and convert them into practical strategies that improve customer targeting, operational efficiency, product performance, and marketing ROI.

E. Data Overview

1. **Source:** Google Public Dataset (E-Commerce Sample)
2. **Timeframe:** 2022–2025
3. **Sample Size:** 30,000 rows (7,500 per year)
4. **Sampling Method:** Stratified random sampling to maintain year-over-year balance and reduce bias.
5. **Key Variables:** Order dates, status, user demographics, product brand/category, pricing, profit, delivery metrics, traffic sources.

F. Methodology

This analysis was conducted using a stratified random sample of 30,000 e-commerce transactions collected from 2022 to 2025. The data was sourced from a publicly available Google dataset, with 7,500 rows sampled per year to ensure year-over-year balance and reduce temporal bias.

The dataset was extracted using **SQL queries** applied to the Google Public Dataset. Relevant fields such as order date, product category, user demographics, pricing, profit, and traffic source were selected and filtered to ensure consistency.

The data preparation process included:

1. **Data Cleaning**: Removing duplicates, handling missing values, and standardizing date formats and category names.
2. **Segmentation**: Grouping customers by age, gender, and country; products by category and brand.
3. **Aggregation & Trend Analysis**: Monthly sales volumes, seasonal fluctuations, and category-level performance were examined to identify patterns.
4. **Comparative Metrics**: Calculated return rates, profit margins, and conversion rates per traffic source and product group.

Tools Used:

Data was cleaned and analyzed using **Microsoft Excel**, primarily through pivot tables and conditional logic. **SQL** was used for structured filtering, sampling, and segmentation during the extraction phase.

No machine learning or predictive modeling was applied in this phase, as the focus was on **exploratory and descriptive analytics** to uncover actionable insights.

G. Key Strategic Insights

G.1 Sales & Profit Overview

1. Total Sales: **$1,724,179**
2. Product Cost: **$831,128**
3. Profit: **$893,051**
4. Return Rate: **9.89%**

   Insight: Strong profit margin achieved, but nearly 1 in 10 orders are returned, indicating room for product quality or expectation alignment improvement.

G.2 Sales Trend Over Time

1. Orders increased steadily between Feb and July, peaking in **July (3,414 orders)**.
2. Sharp drop in **August (923 orders)** suggests post-campaign decline.

   Insight: Seasonal campaigns (Q2-Q3) work effectively but need follow-up engagement in August.

G.3 Customer Demographics

1. Dominant buyer segment: **Young Adults (25–34)**
2. Female customers outnumber male buyers in almost all age groups.
   Insight: Young female consumers drive the majority of transactions. This segment should be prioritized in product design and marketing.

G.4 Top Market by Country

1. China: **10,179 orders**
2. United States: **6,267**
3. Brazil: **4,331**

Insight: Focus customer support, logistics, and marketing campaigns in China, US, and Brazil to leverage high demand.

G.5 Product Performance

1. Top-selling categories: **Jeans ($206,552)**, **Outerwear & Coats ($200,330)**, **Sweaters ($136,689)**, **Swimwear ($100,857)**
2. Swimwear: high sales, but possibly high return risk

Insight: Maintain momentum in high-performing categories, but investigate swimwear return reasons.

G.6 Traffic Source Effectiveness

1. Organic: **70%** of total traffic
2. Paid Channels: Facebook (15%), Email (6%), Display (4%)

Insight: Paid channels deliver smaller volume but likely higher conversion. Scaling paid campaigns could improve ROI.

G.7 Brand-Specific Opportunities

1. Allegra K: high volume (981 orders), low average price ($14)
2. Diesel: high average price ($126), low volume (266 orders)

Insight: Leverage Allegra K for upselling campaigns. Promote Diesel as a premium/luxury option.

H. Strategic Recommendations

Area	Recommendation	Expected Impact
Marketing	Target paid ads and email campaigns to Young Adults, especially females	Higher conversion and retention
Product	Investigate swimwear returns; improve sizing or quality	Lower return rate, higher satisfaction
Market Focus	Strengthen operations and customer service in China, US, and Brazil	Boost loyalty in top-performing market
Inventory	Upsell low-cost brands, highlight premium brands with unique value	Balanced growth across price segments

I. Limitations & Assumptions

While this analysis provides valuable insights into Klyre's e-commerce performance, several limitations and assumptions should be considered:

1. **Sample-Based Data**
   The dataset used is a **stratified random sample** of 30,000 transactions (7,500 per year), not the full population. Therefore, all findings represent **directional trends**, not absolute figures.

2. **No Campaign/Event Context**
   The data does not include detailed metadata on **specific marketing campaigns**, promotions, or seasonal events. Interpretation of peaks and drops (e.g., July spike or August decline) is based on observed patterns, not confirmed events.

3. **Limited Behavioral Data**
   User behavior beyond the transaction—such as browsing history, cart abandonment, or session duration—is not available, restricting analysis to **purchase-level insights** only.
   Assumed Data Accuracy
   It is assumed that the original data source (Google Public Dataset) is **clean, complete, and accurately labeled**. No external validation was conducted.

4. **Static Timeframe**
   The report covers the years 2022 to 2025. Any insights may not reflect **real-time shifts in consumer behavior or market conditions** beyond this timeframe.

5. **Exploratory Scope Only**
   This report is **descriptive in nature** and does not employ predictive modeling, causal inference, or statistical testing. Recommendations are based on observed patterns and business logic.

Readers are encouraged to consider these limitations when interpreting the results and applying the recommendations to business decisions.

J. Conclusion

Klyre's data from 2022 to 2025 highlights strong profit potential and a clear customer profile. With targeted improvements in marketing, product quality, and regional strategies, the company can scale effectively while optimizing profitability.
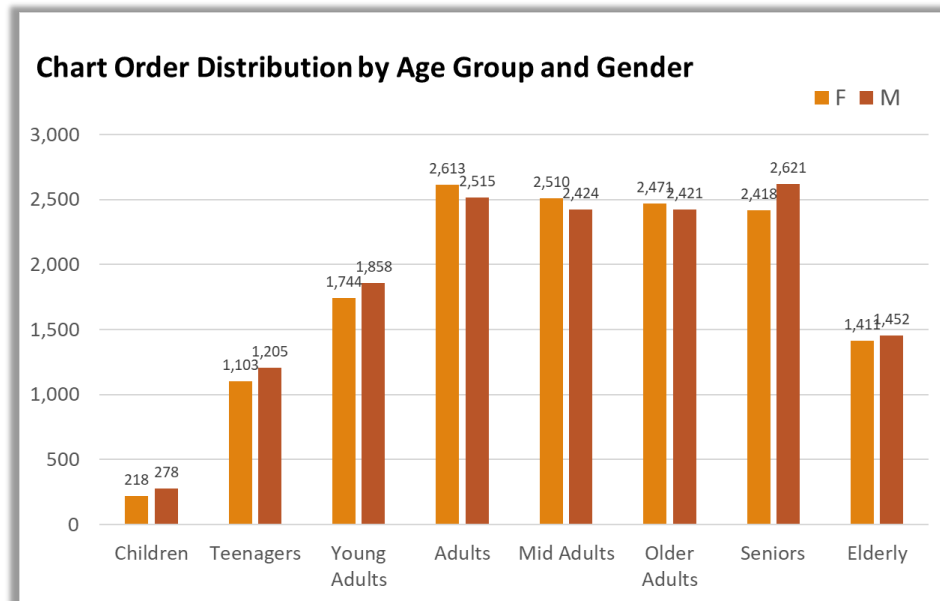
K. Appendix (for full version)

1. Monthly Distribution of Orders
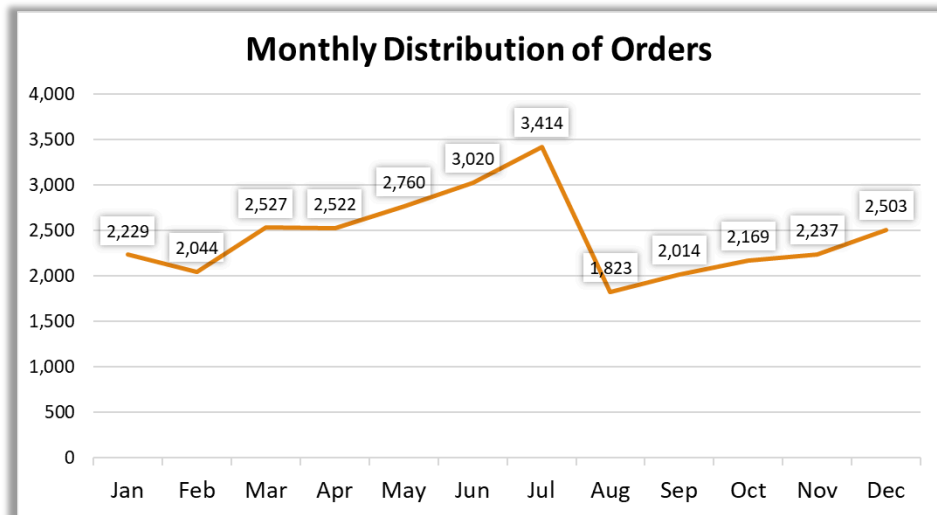
Order volume steadily increased from February to July, peaking in July (3,414 orders). A sharp drop in August (923 orders) may indicate seasonal effects or post-campaign decline.

2. Order Distribution by Age Group and Gender

**Chart Order Distribution by Age Group and Gender**

The "Young Adults" group (ages 25–34) placed the highest number of orders, with a female majority. Marketing efforts should be tailored to this demographic segment for optimal impact.

3. Top 10 Countries by Number of Orders

Top 10 Countries by Number of Orders

Country	Orders
China	10,179
United States	6,267
Brasil	4,331
South Korea	1,533
France	1,504
United Kingdom	1,408
Germany	1,181
Spain	1,126
Japan	790
Australia	565
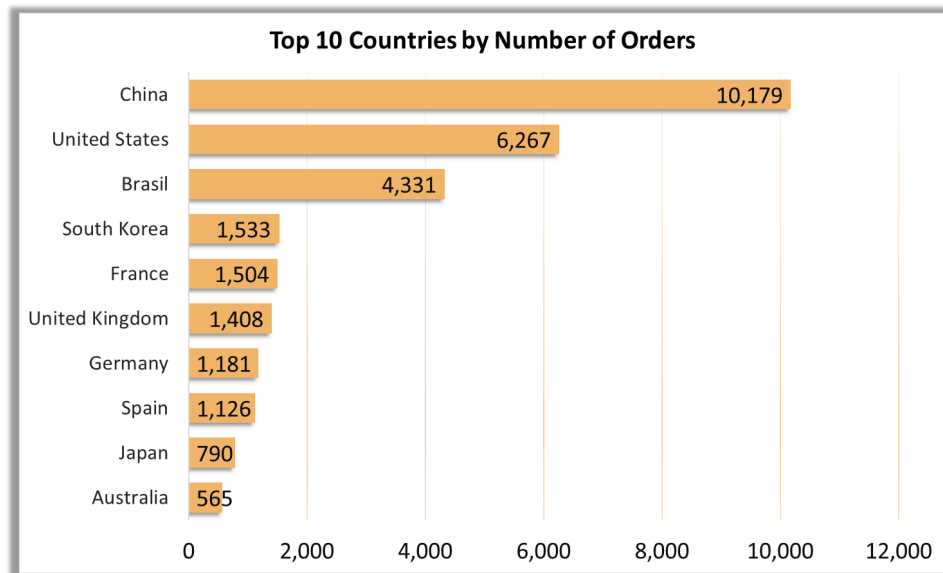
China, the United States, and Brazil accounted for the highest order volumes, indicating these markets may benefit from prioritized logistics, support, and localization strategies.

4. Order Distribution by Traffic Source

Order Distribution by Traffic Source

- Display
- Email
- Facebook
- Organic
- Search
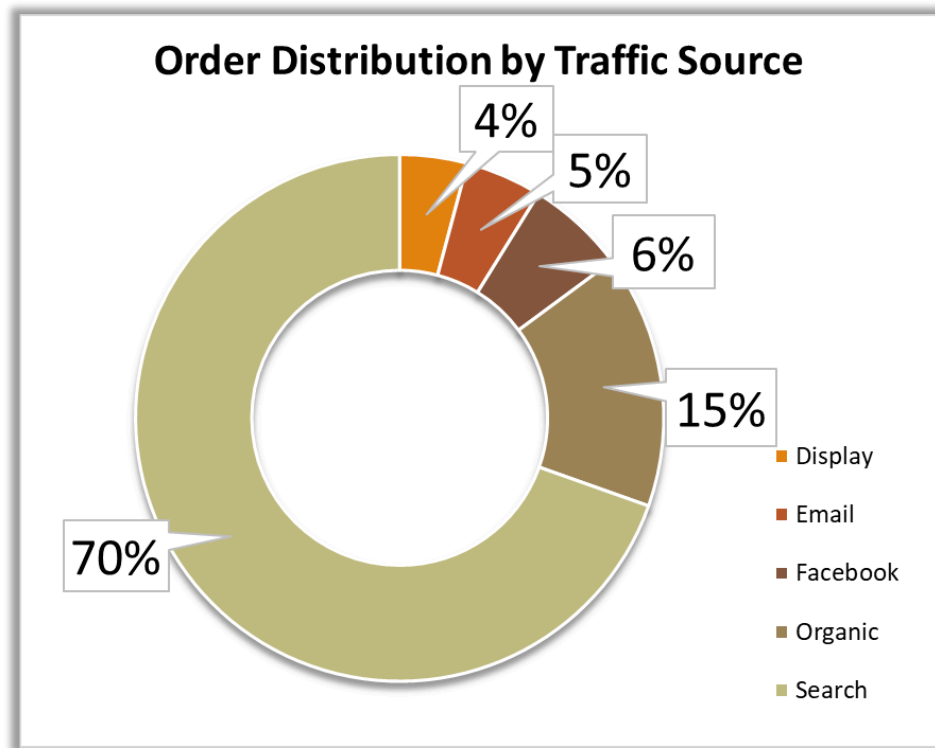
70% of traffic comes from organic channels, while Facebook (15%) and Email (6%) represent the largest paid sources. This highlights an opportunity to improve conversion from paid channels.

5. Order Volume and Revenue by Product Category

Order Volume and Revenue by Product Category

Product Category	Total Order	Total Sales
Accessories	1,598	$66,270
Active	1,392	$68,961
Fashion Hoodies & Sweatshirts	1,899	$98,296
Intimates	2,143	$72,007
Jeans	2,079	$206,552
Outerwear & Coats	1,365	$200,330
Shorts	1,849	$84,221
Sleep & Lounge	1,768	$89,150
Sweaters	1,801	$136,689
Swim	1,821	$100,857
Tops & Tees	1,918	$77,453

Jeans and Outerwear lead in sales volume. Swimwear also performs well but may require attention due to potential high return rates. Product development should focus on high-performing categories.

6. Order Volume and Average Price by Brand

Order Volume and Revenue by Product

Product Brand	Total Orders	Avg of sale price
Allegra K	981	$14
Calvin Klein	507	$66
Carhartt	390	$71
Hanes	339	$21
Volcom	289	$57
Nautica	281	$42
Tommy Hilfiger	266	$75
Diesel	263	$126
Quiksilver	261	$61
Hurley	258	$50
Dockers	240	$41
Columbia	235	$71
Levi's	234	$49
Wrangler	213	$44
Speedo	213	$50

Allegra K generates high volume with a low average price ($14), making it suitable for upselling strategies. Diesel, with the highest price point ($126) but low volume, can be positioned as a premium brand.

7. KPI Highlights: Sales, Cost, Profit, Return Rate

$1,724,179	$831,128	$893,051	9.89%
Total Sales	Product Cost	Profit	Return Rate

Allegra K generTotal Sales: $1.72M, Profit: $893K, Return Rate: 9.89%. Profit margins are strong, but the near-10% return rate signals a need for better quality control or expectation alignment.