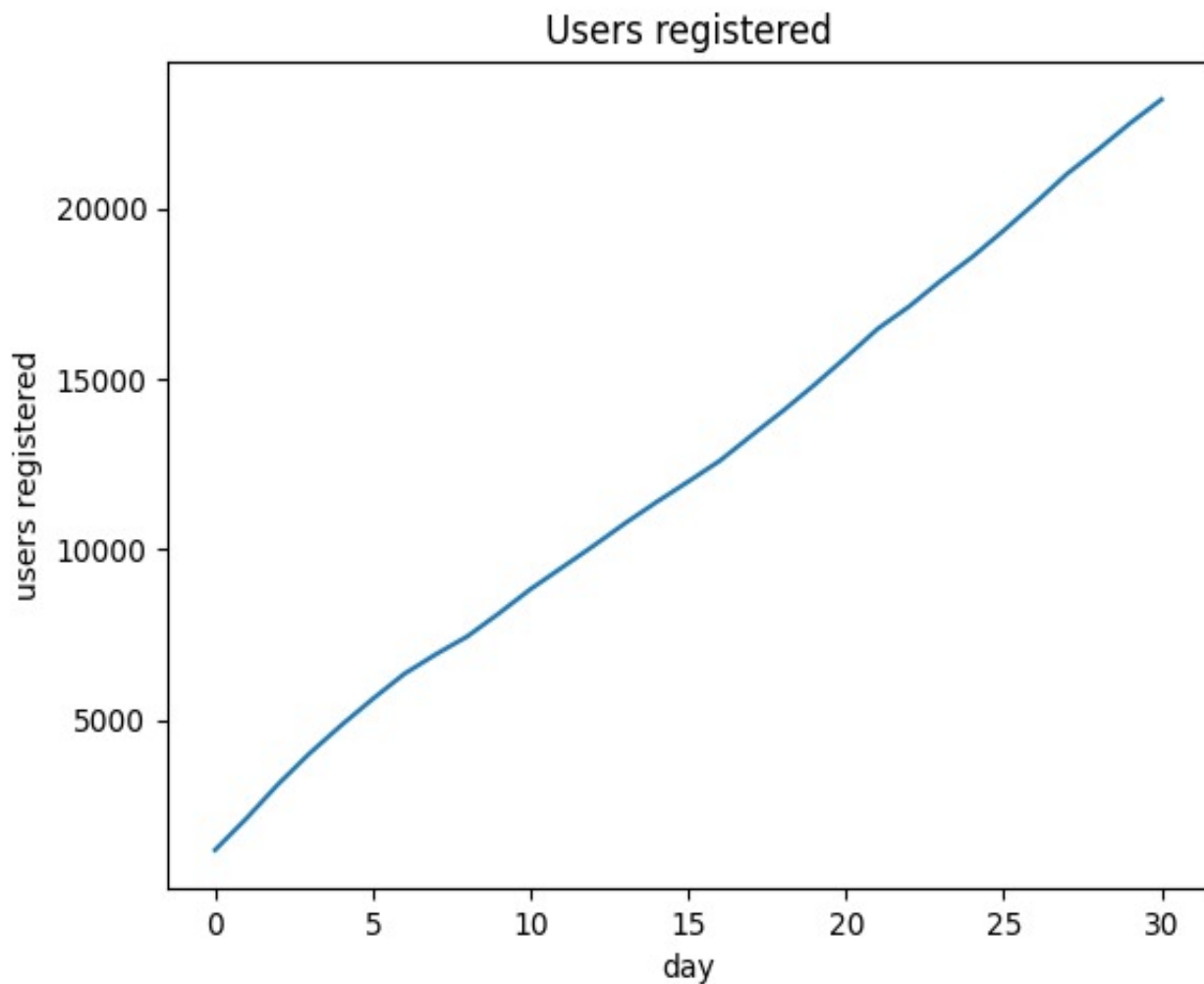


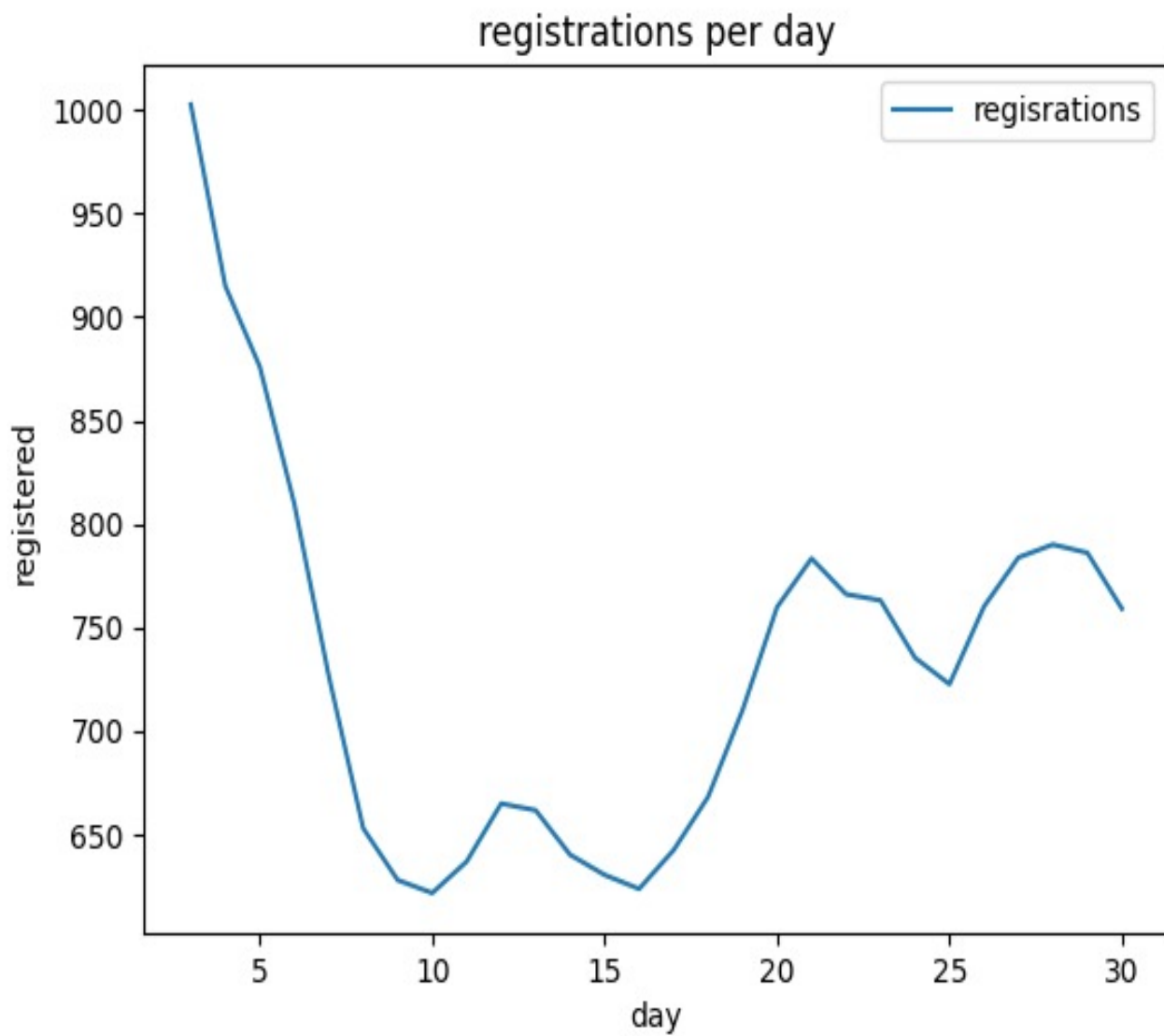
Social Media Analysis

1. Prepare a report on the basic product indicators.

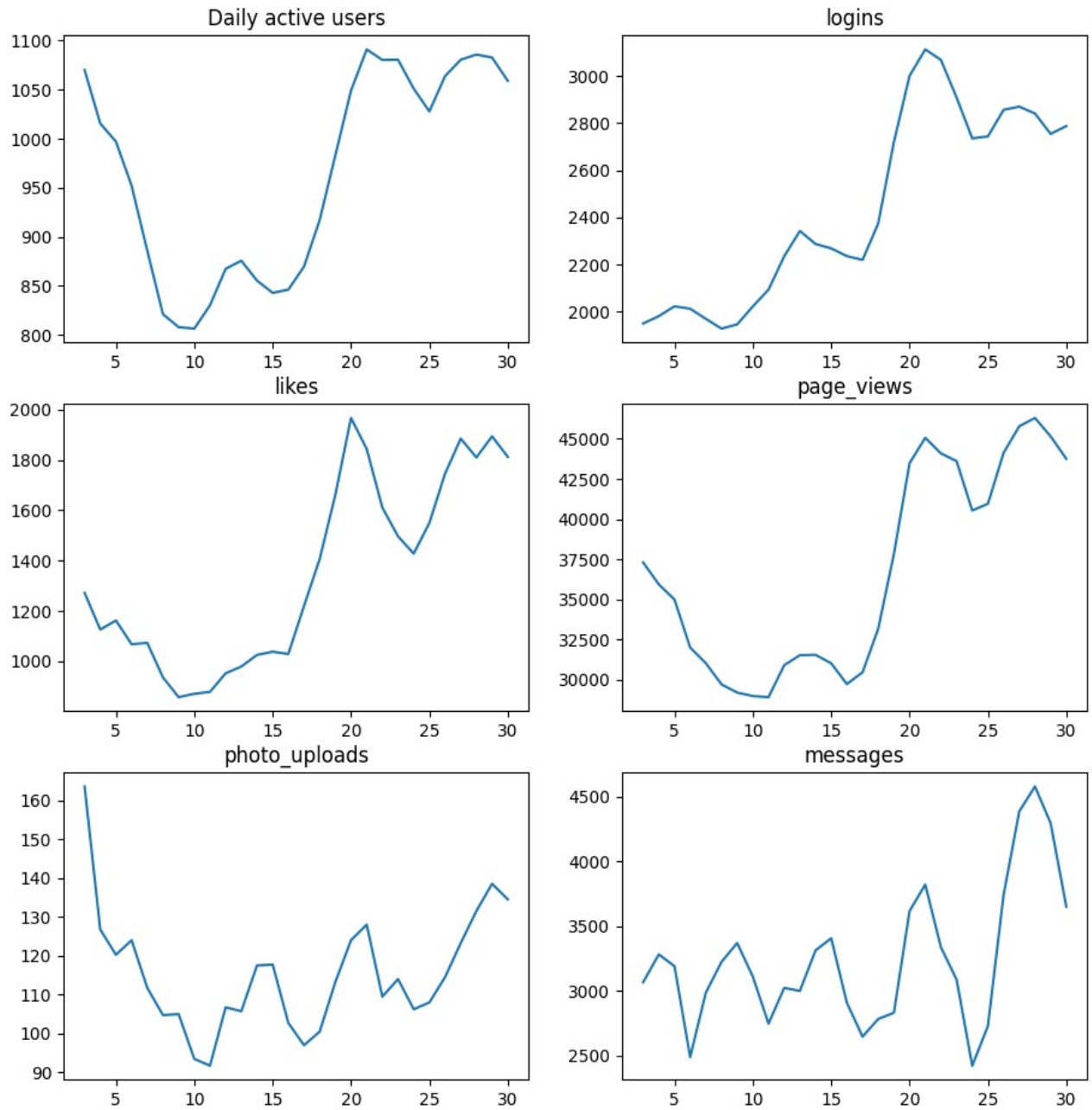
From the data, the number of registered users is steadily increasing, as evident from the graph below. On average, 748 new users register per day.



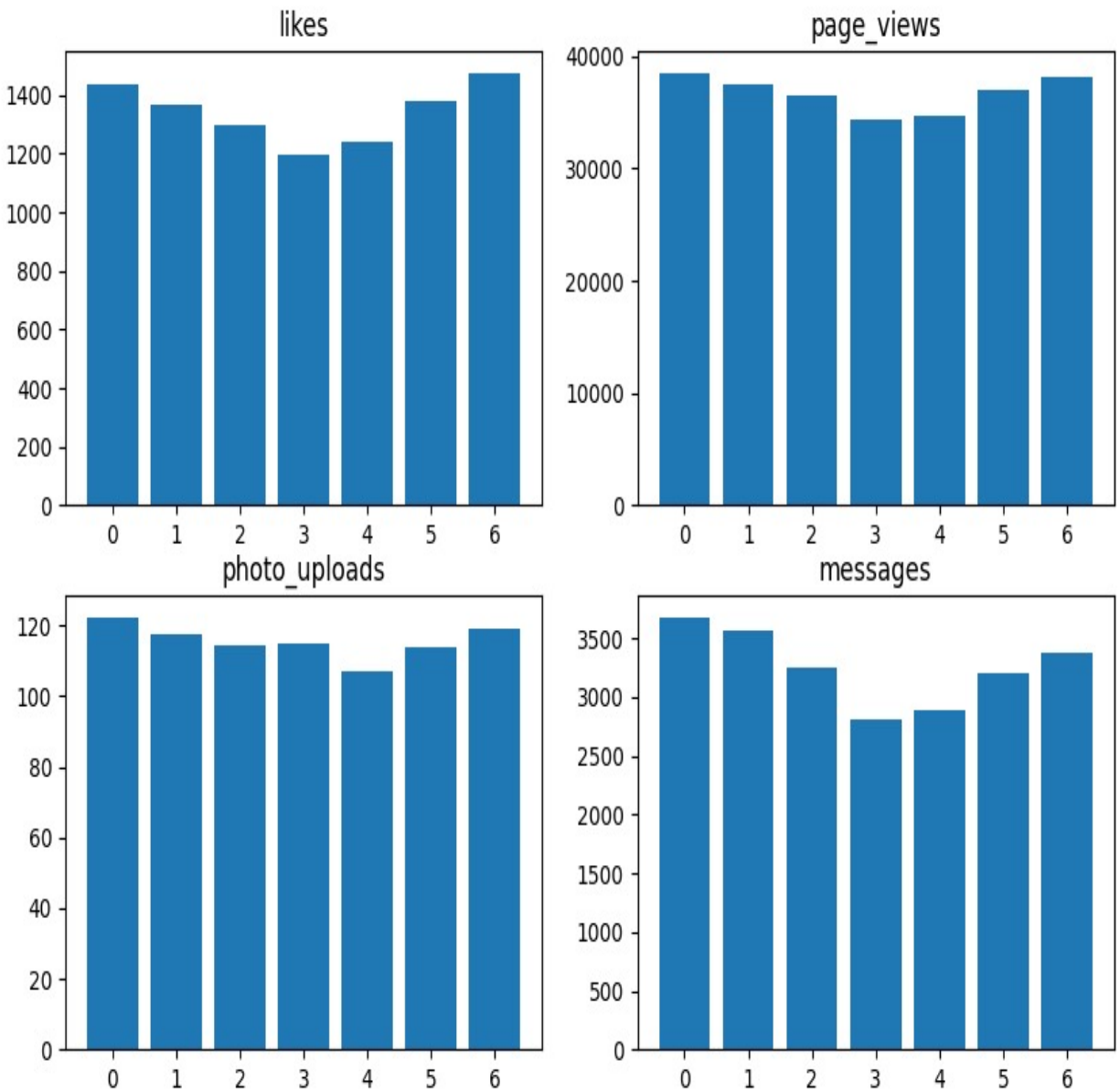
The smoothed registration graph shows that the initial registration rate was (1000) twice as high as after 10 days, but it remains above 500 users per day and continues to grow on average.



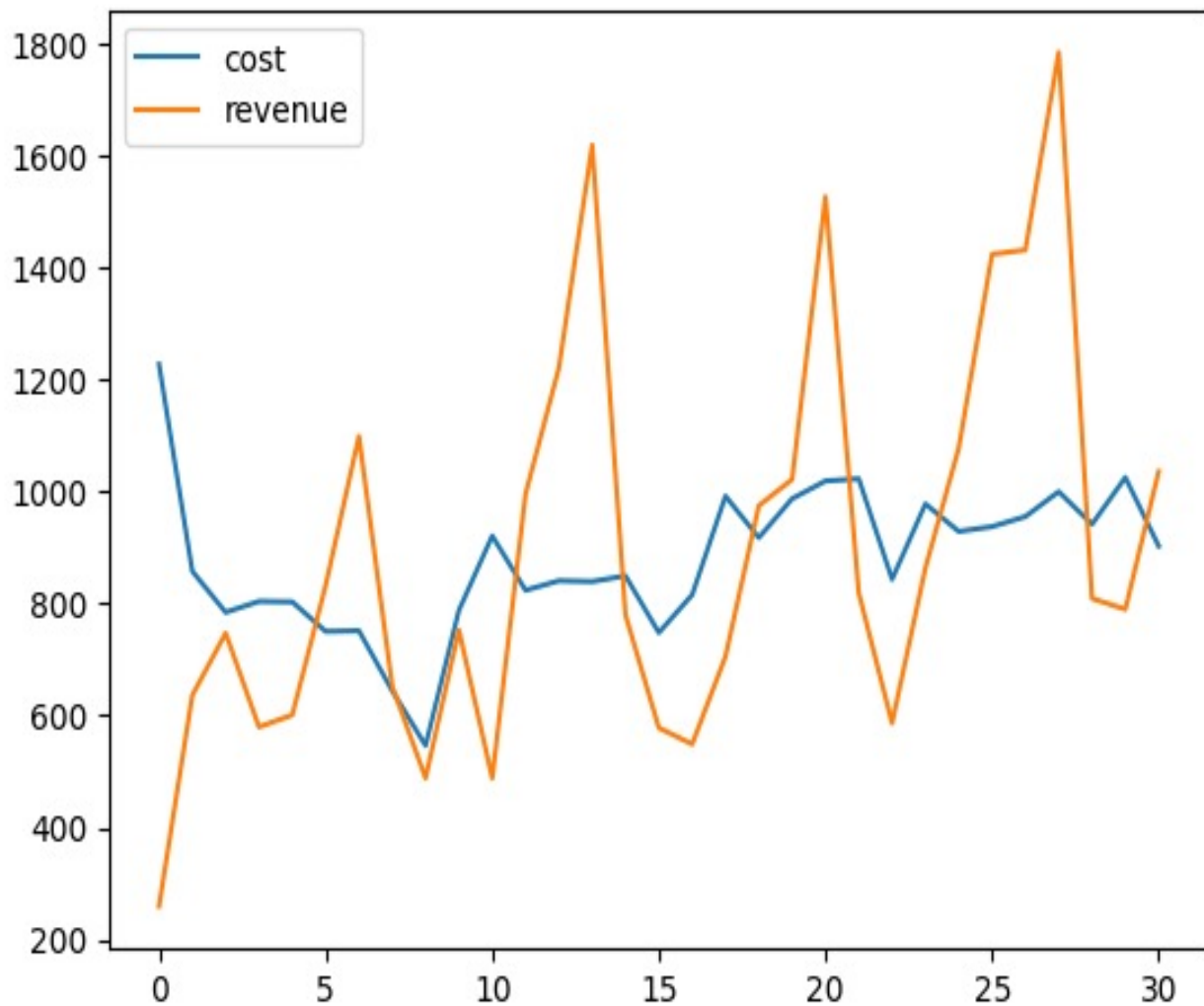
Graphs of the number of active users and their actions of logins, likes, page views, photo uploads, and messages per day are also provided.



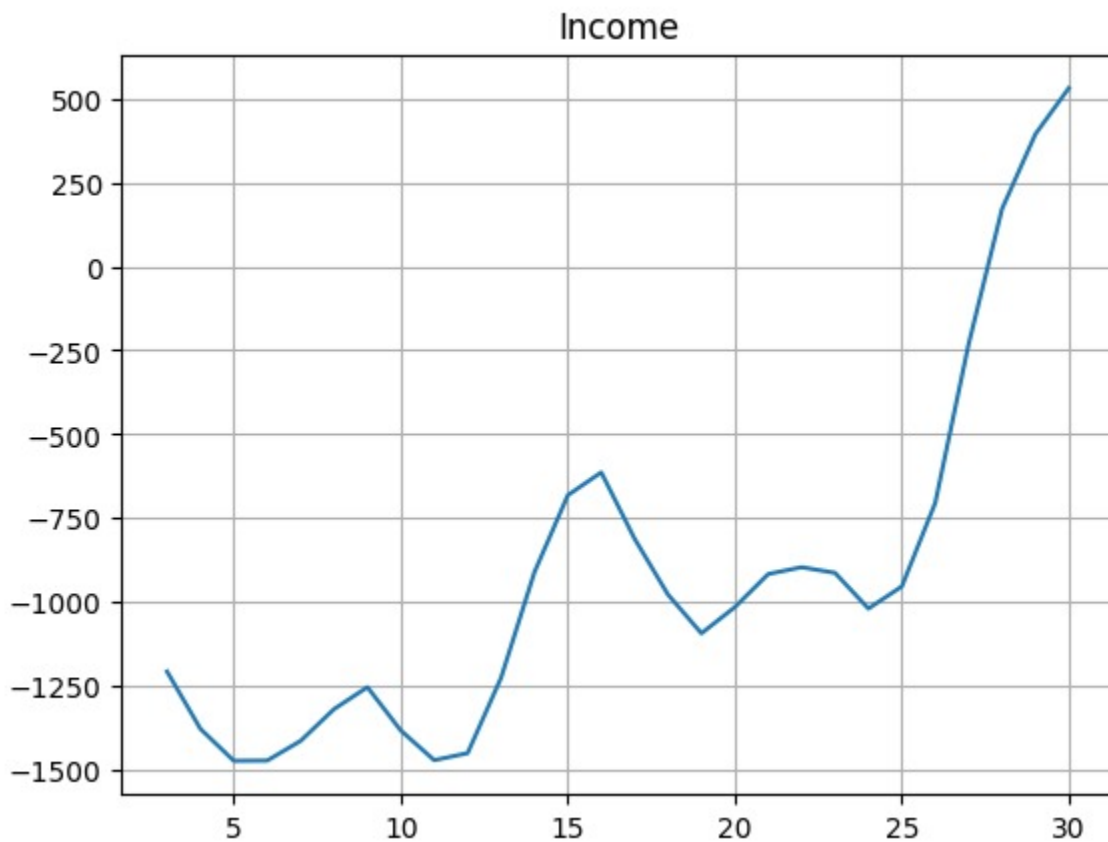
The product's user activity decreases in the first few days but then grows. There is also a noticeable weekly seasonality, with reduced activity mid-week. For clarity, histograms of the average number of actions that is likes, page views, photo uploads, and messages per day of the week are included.



The most significant difference is in the number of messages: on Mondays, 30% more messages are sent than on Thursdays. Regarding revenue, there is also seasonality, with a more significant impact.



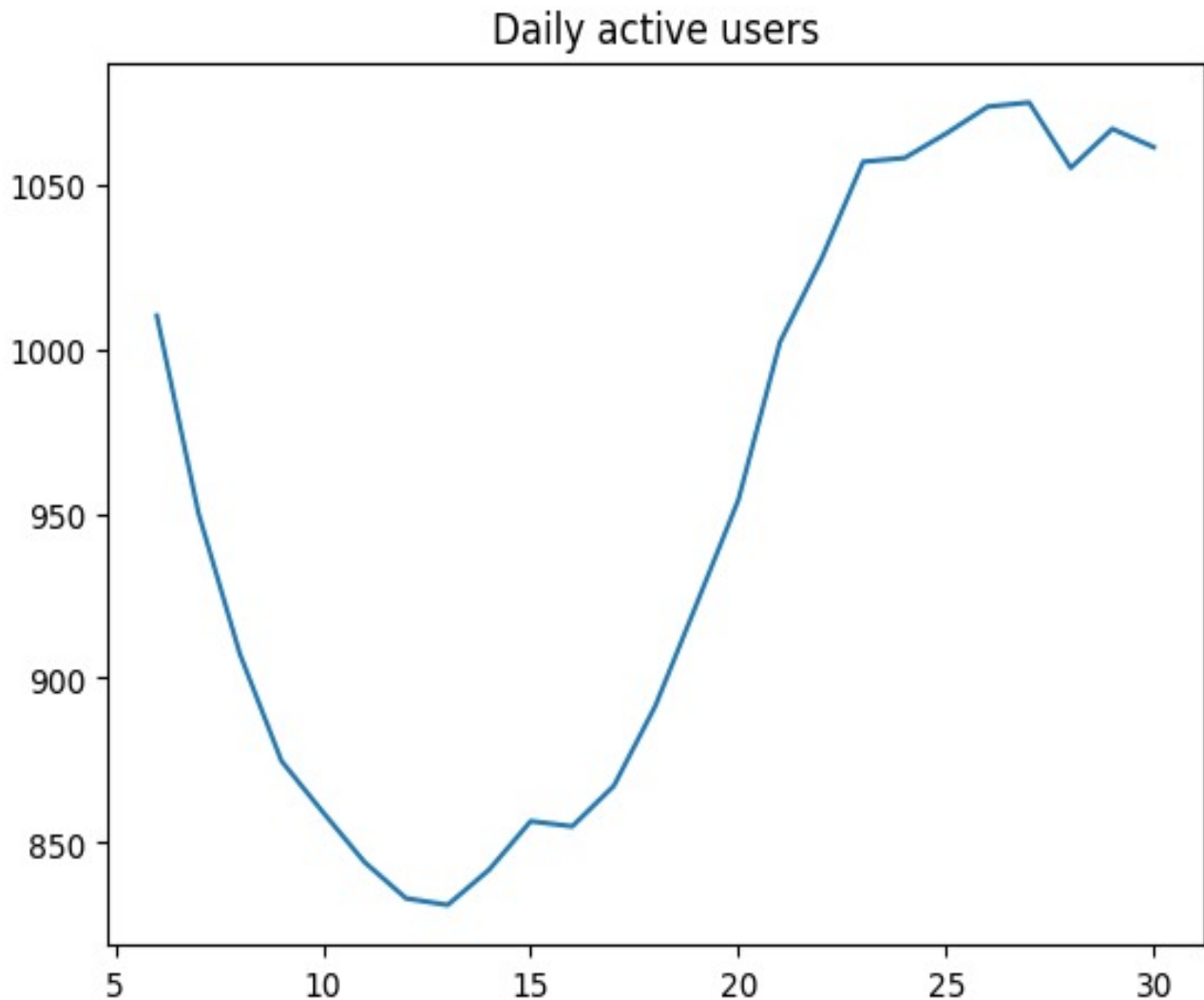
Profit becomes positive on March 26, indicating a growing trend. Since the product was recently launched, a more extended observation period is needed for a detailed revenue analysis.



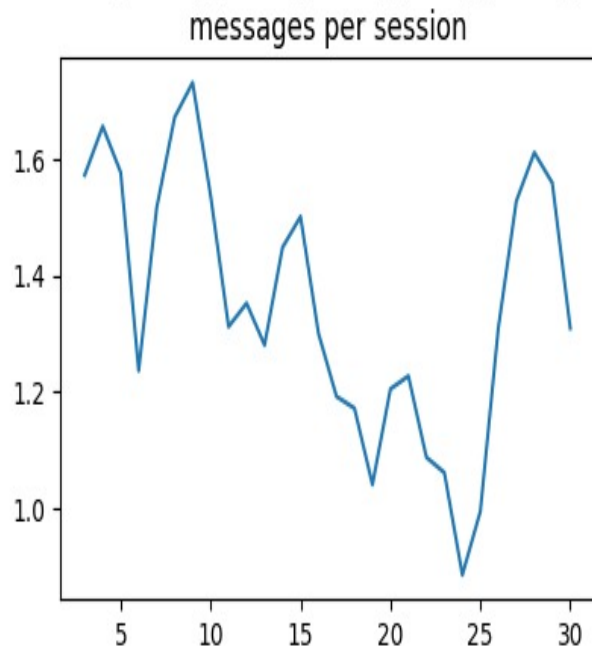
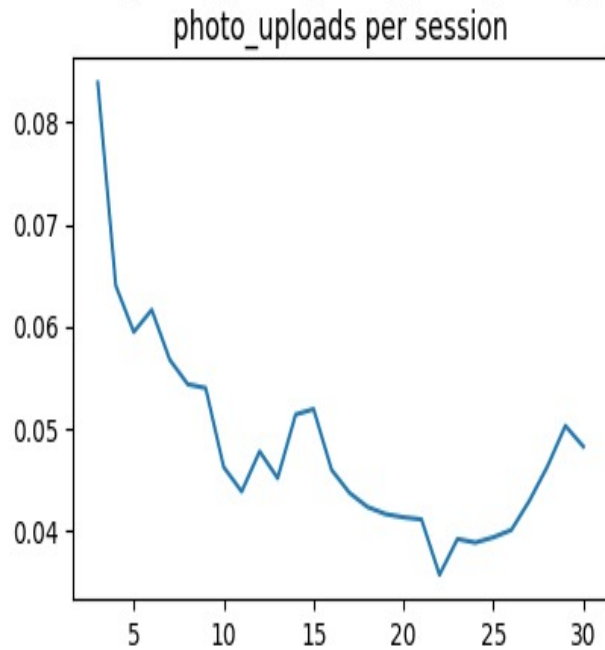
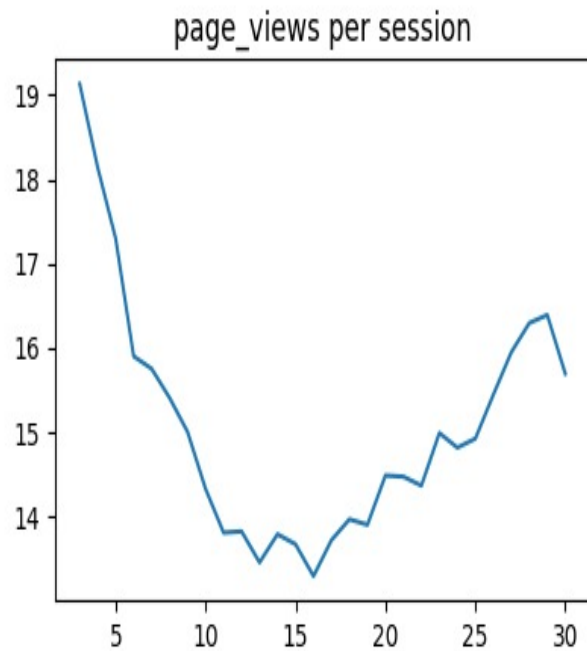
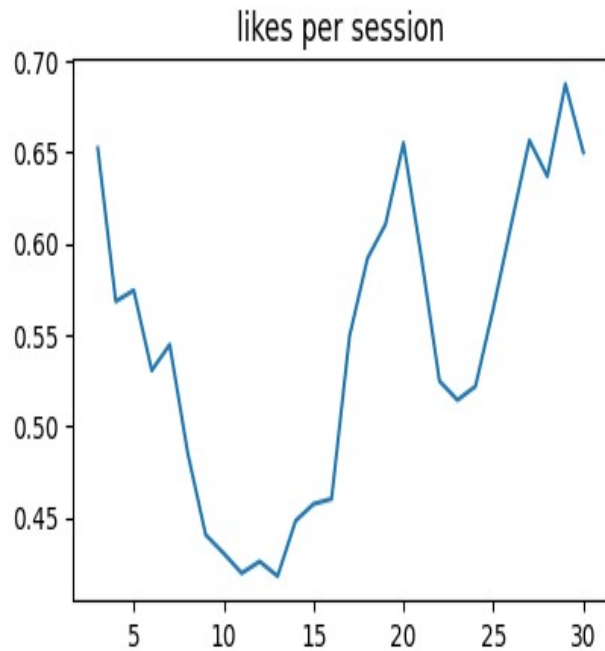
It's worth noting the small number of uploaded photos – within a month, 90% of users haven't uploaded any, 8% uploaded one, and only 2% uploaded more.

2. Develop two dashboards with metrics: activity metrics (for the product manager) and economic metrics (for marketers).

Daily Active Users: 1061 at the end of the period, showing growth except for the post-launch period.



User Actions per Session at the end of the period: 0.65 for likes, 15.7 for page views, 0.05 for photos, and 1.3 for messages.



- Monthly Recurring Revenue: \$481.
- Customer Acquisition Cost for different networks:

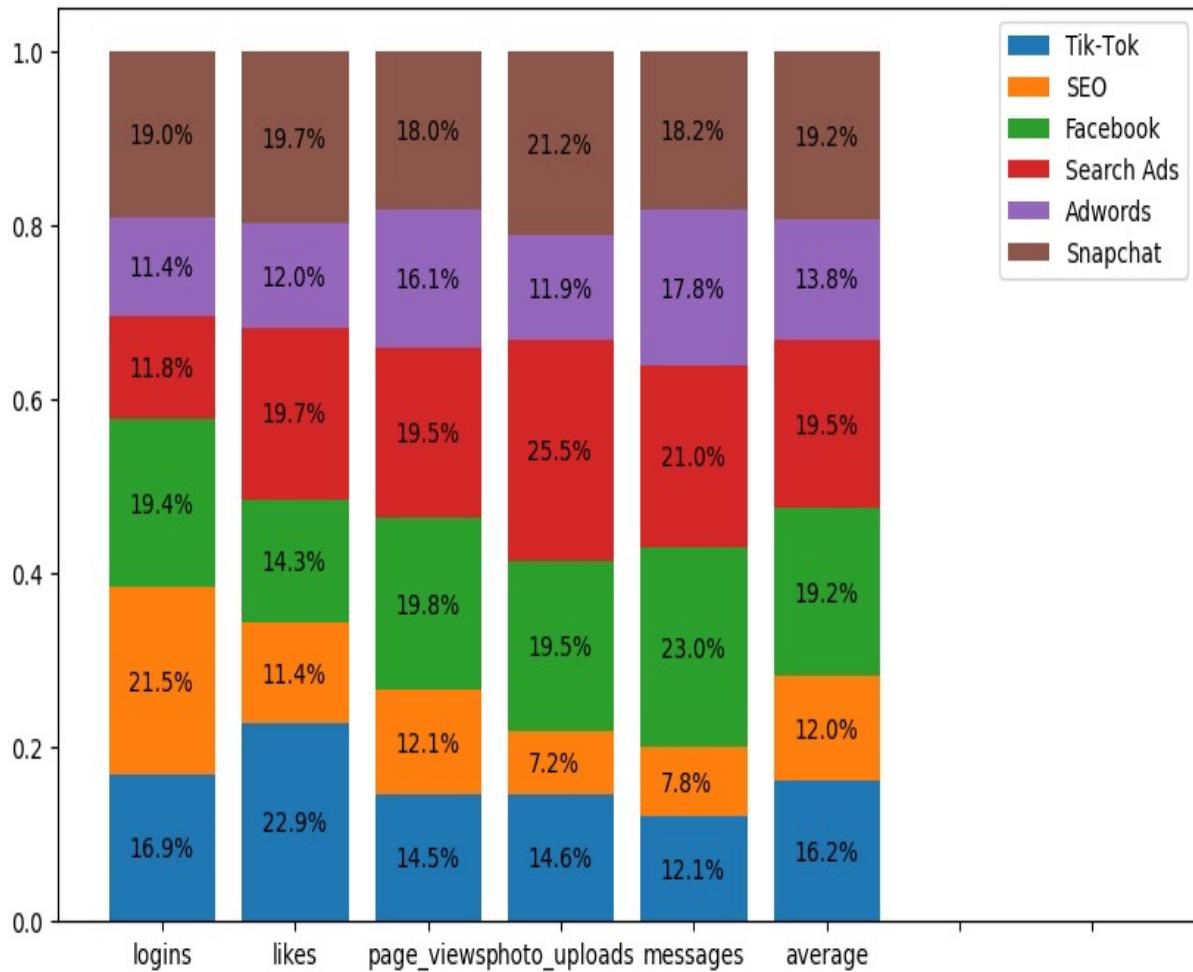
Media	Cost
Tik Tok	0.820465
SEO	0.702082
Facebook	0.924963
Search Ads	1.968520
AdWord	0.238272
Snapchat	0.618551

3. Evaluate the effectiveness of different networks from both a user quality and economic perspective.

We will assess the effectiveness of networks in terms of user quality using a histogram depicting user activity on different platforms. The number of users normalizes this histogram.

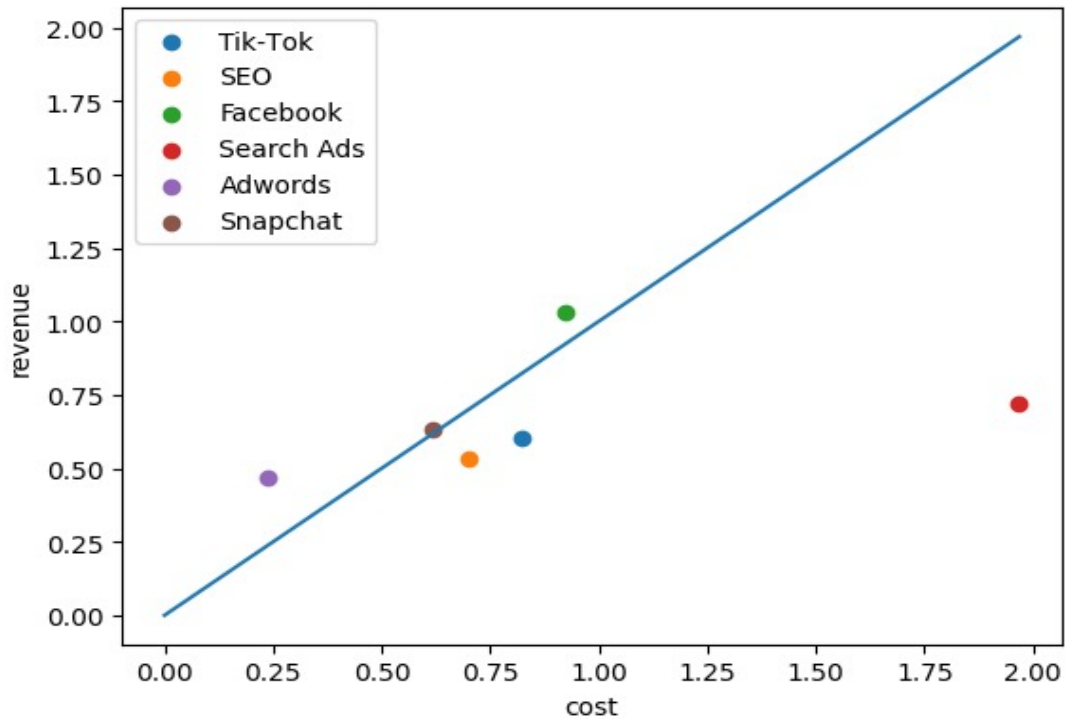
For example, "19.0%" for the action "login" and the network "Snapchat" means that, for an equal number of users from all platforms, 19% of logins will be made by users recruited through Snapchat.

The right column indicates the activity index, which is the average of all other actions.

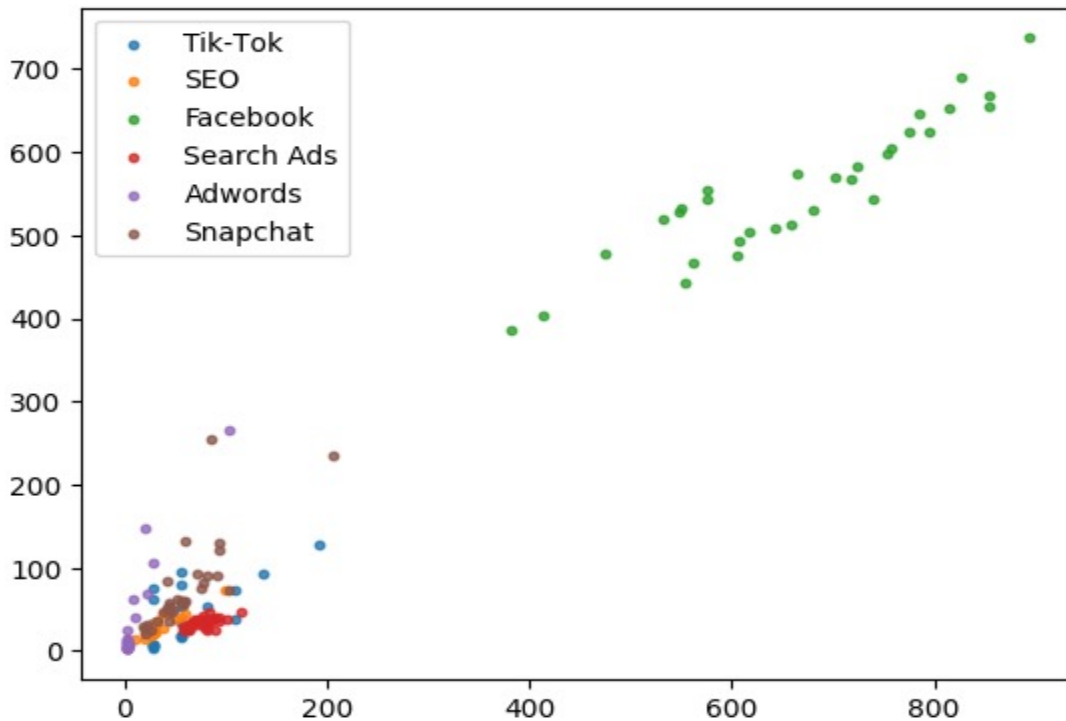


Significantly lower user activity is observed with SEO and AdWords, while user activity on other networks is more or less consistent. However, for a complete understanding of network effectiveness, it is necessary to consider the expenses and revenue associated with these users.

The graph below illustrates expenses and revenue per user for different networks, with the line indicating the equality of costs and revenue.



We will also provide a visualization of the dependency between the number of acquired users and the amount of money invested.



The fastest growth is observed with AdWords, the network with the best Return on Investment (ROI). Snapchat, the second-best network in terms of ROI, also exhibits significant growth. Facebook, despite being second in ROI, attracts more users with increasing expenses. Thus, investments in these networks appear safe in terms of user quantity.

4. Provide recommendations to marketers for optimizing efforts in attracting new users.

Considering the graphs and the Customer Acquisition Cost metric:

- **Search Ads:** The highest cost per user without compensating activity. Recommend discontinuing investment in this network.
- **AdWords:** Lowest cost per user with moderate activity. Recommend increasing investment for further analysis.
- **Facebook:** Highest number of users with the most significant expenses. The user activity is among the best, ensuring the highest absolute profit. Recommend maintaining the current user acquisition strategy through Facebook.
- **Snapchat, TikTok:** High user activity with moderate acquisition costs. Recommend keeping expenses the same and reanalyzing in a month.
- **SEO:** Low user activity with moderate acquisition costs. Recommend maintaining or reducing expenses and reevaluating in a month.