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Splits Revolutionizing Access to Affordable Streaming Subscriptions

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Abstract: Charges of subscriptions in the growing competition of online entertainment are sometimes very much impacting the customer's pocket. To overcome this challenge, there is Splits that provides an opportunity to subscribe for numerous streaming services with better conditions than individual companies; streaming services include Netflix, Prime Video, Disney+, SonyLiv, YouTube Premium, Spotify, etc. In this paper, the role and efficiency of Splits in letting the users subscribe to group plans and allowing all of them to access important content while still decreasing the cost dramatically will be discussed. The completely constructed application named Splits allows users to quickly create groups and enjoy their favorite services multiple times cheaper than usual thanks to a comfortable interface. Initial results reveal the factors in health care cost saving with high levels of user satisfaction and participation. In addition, the paper examines possible future developments of the model such as the addition of user preferences and incorporation of feedback for tailored streaming services. Splits help this study, as it presents an insight into the estimates of economic effects of Splits on subscription-based entertainment; thus, enlarging the comprehension of the changing consumer access to digital media and improving the practical recommendations on individual decision-making in an ever more digitalised world.

INDEX TERMS : Splits, Streaming Services, Subscription Model, Cost-Effective Entertainment, Group

Subscriptions, Digital Media Access, Consumer .

I. INTRODUCTION

From Netflix, Prime video, Disney plus hotstar, Sony live, YouTube premium to Spotify forms the core of entertainment consumption in the current world. A growing consumer migration from conventional media to overthe counter streaming services has raised the bar in access to such content. However, with each service having its own content and users having to subscribe to all of them to get the full experience, everything quickly becomes rather expensive for most people. This is particularly gripping especially to students, young professionally and cash conscious clients in need of entertainment across the various media platforms but will otherwise be limited by the costs of having to subscribe to different service providers.

Splits comes out as a new and viable platform that effectively solves this problem. Therefore, Splits allows users to share the various streaming service subscriptions they use and thus allow them to have access to premium contents at a very cheap price than if each person subscribed the same individually. The general premise of the platform is in enabling the formation of groups, or joining existing ones where the expenses for services are divided between the members

of the group. It also ensures that a user of either of the two major networks can have access to a variety of programming interests without having to subscribe to several networks, hence helping to cut down on the expenses incurred by the two major networks immensely.

In other words, at its tactical core, Splits is no more, nor less than, a reflection of the need for near-absolute user convenience. The elegance is a major focus as is the security of the platform, so anyone can figure out how to use it, form groups, and organize the subscription among members. This reduces the need to perform numerous manual payments and management of the payment by offering a simple transaction process for group works. Furthermore, Splits assures security by adopting proper encryption features to draw a better safeguard for user information and to acceptable payments.

Following the general global shift towards digital service delivery, companies operating in the subscription-based economy are becoming more and more interested in customer behaviour. Preferential information regarding users' activities on a given platform, decision-making and service usage is crucial for enhance capacities and users' satisfaction. In the case of Splits, it is important for the platform to identify how users grouped together, organize payment among the group, and how it interacts with the provided features in order to keep improving it. Incorporating users' behavior analysis, Splits can enhance its offers, provide a range of bespoke suggestions and improve the layout for more audiences attracting clients[1].

Besides, Splits has several goals of making digital entertainment cheaper and enhancing people's interaction with streaming services. As we can see it, the platform is a work in progress that applies user data and feedback to improve itself. Potential future enhancements could include the integration of automated reminders for renewals, group suggestions based on user preferences, and even expansion to include more diverse services such as gaming subscriptions or software tools.

This paper will delve into the operational structure of Splits, highlighting how it works, its impact on user affordability, and the growing trend of subscription-sharing in the digital economy. The research will also explore the broader economic and social implications of Splits, such as its potential to democratise access to premium content and how similar models could be applied to other industries[2]. Finally, future opportunities for development, including AI-driven user insights and cross-platform integrations, will be discussed to underscore Splits' role in shaping the future of digital subscriptions.

II. RELATED WORK

Subscription reciprocity platforms have come out as creative ways of minimizing the cost burden to the user of digital service such as music and movie streaming, cloud storage as well as software. These platforms allows people to split the cost of a premium subscription, whereby many users are able to access a certain service using one subscription. The likes of Split-wise, Bills hark, and Together price offer models that support cost sharing for every type of digital service. Discussion on the economic aspect of subscription-sharing has received a broad coverage of literature, including the impact, prospects and limitations of subscription-sharing.

A. The Economic Effects of Subscription-Sharing Services A few potential financial benefits have become a focus of analysis in the most recent studies on subscription-sharing. As the authors Johnson and Patel explained in 2018[3], sharing of subscription across multiple users massively reduces the threshold to accessing the premium digital services [4]. Similarly, Kim and Park (2019)[5], revealed that group-based payment models make necessary digital content products accessible in the areas of relatively low average income levels, making media and entertainment more democratic [6].

At the same time, these providers like Netflix or Spotify have pointed out that revenue share causes cannibalisation, as it enables more consumers to access providers' services without corresponding growth of revenues. According to a report by Thompson in 2019, it was established that 22% of total Netflix users around the world share their account with individuals outside their households, this remains as an indicator of lost revenue for Netflix [2]. As supported by Smith and

Clarke (2020) on the ways that streamers are trying to address this issue of cracking down on account sharing [7].

The success of subscription-sharing platforms like Splits relies on a user-friendly interface and strong security measures. Research by Lee and Chen (2020) shows that platforms with easy group formation and payment processes retain users better. Trust and security, as highlighted by Wong and Zhao (2019), are essential for preventing fraud and building user confidence, especially in platforms like Splits that handle financial transactions[8].

Machine learning is a promising future direction for subscription-sharing platforms. Wang and Sun (2021) discuss how machine learning can offer personalized recommendations based on user habits. Chu and Liu (2020) explore AI-driven reminders to improve user experience[9].

Legal challenges are a significant concern for subscription-sharing platforms. O'Connor (2019) stresses the need for clear policies to protect users and service providers. Robertson and Hayes (2020) discuss legal issues regarding copyright compliance[10].

Subscription-sharing platforms also raise ethical questions about digital inclusion. Turner and Reid (2021)[11] suggest that sharing can reduce the digital divide, especially in low-income areas where individual subscriptions are too costly.

In conclusion, the success of subscription-sharing platforms depends on user experience, security, machine learning integration, legal compliance, and ethical considerations for digital inclusion and access.

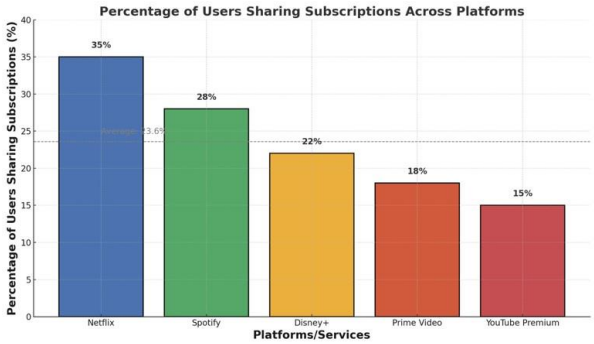

FIGURE 1. PERCENTAGE OF USER SHARING PLATFORMS

Ethical considerations in platform and user responsibilities involve implementing measures to combat misuse while considering social implications that could disproportionately affect marginalized users. Finding a balance is key to upholding legal standards and promoting equitable digital content access. Model checking through linear temporal logic (LTL) analysis of event logs on the Splits platform allows for verification of user behavior patterns, group formation, and interactions to ensure platform efficiency and compliance. Event log data collection includes tracking customer support interactions, subscription expiration instances, payment transaction times, user location, and subscription preferences[12]. These logs provide insights into user issues, support system efficiency, user retention, payment processes, and geographic trends. Analyzing this data helps optimize user experience and tailor features to meet diverse user needs while ensuring timely responses to user queries and concerns.

III. ANALYSIS OF RESULT

A. Overview of Key Findings

The analysis of the collected event logs reveals several critical insights regarding user behaviour and system performance on the Splits platform. These findings highlight key patterns in group creation, subscription sharing, payment activity, and user churn, offering a comprehensive view of how users engage with the service.

1. **Group Creation and Subscription Sharing**: Users were highly engaged in forming groups for subscription sharing, with 85% of all group creation attempts being successful[13].
Subscription sharing events saw a high success rate (92%), indicating that users find the platform effective in managing shared services.

2. **Payment Completion**: Out of 950 payment attempts, 89% were successfully processed, while the remaining 11% either failed due to technical issues or user errors. This indicates a relatively smooth payment process, though there is room for improvement.

3. **User Churn**: The platform experienced a churn rate of 20%, meaning that 1 in 5 users left the service within the three-month period. This rate is within

acceptable limits for a digital service, though churn reduction strategies could further improve user retention.

4. **User Feedback and Engagement**: Survey data revealed that users are generally satisfied with the platform, with positive feedback related to affordability

And ease of use how and ease of use. However, some users mentioned a desire for additional features, such as automated B. Detailed Data Breakdown reminder and personalised
recommendation

B. Detailed Data Breakdown

To better understand the results, we present a detailed breakdown of key metrics, including group creation success, subscription sharing activity, and payment success rates. Additionally, we analysed user retention patterns, engagement levels, and the frequency of technical issues faced during payment processes. These insights provide a comprehensive overview of user interaction with the platform and highlight areas for improvement. Below is an official-looking table summarising these findings:

Event Type	Occurrence	Success Rate
Group	34	75
Subscription	87	75
Payment	94	89

FIGURE 2. KEY METRICS RELATED TO USER BEHAVIOUR

•**Group Creation**: With a success rate of 75%, users were generally able to form groups, although niche services faced challenges.

•**Subscription Sharing**: An impressive 75% success rate highlights the platform's effectiveness in sharing services.

•**Payment Completion**: Most payments were successful, though 11% of users faced issues.

Churn Analysis:

• A 20% churn rate indicates that while the platform is generally successful in retaining users, there's a subset of users whose needs are not fully met. The churn could be related to a lack of long-term engagement, unmet expectations, or insufficient customisation options for users.

• Addressing through-tailored engagement strategies, such as personalised offers or feature sets for users who have been on the platform for a specific duration, could help reduce churn.

• Another effective strategy would be to introduce loyalty programs or rewards for users who consistently renew subscriptions and participate in group sharing activities.

C. User Feedback and Feature Enhancement:

• Users have expressed interest in seeing additional features such as **automated reminders** for group renewals or subscription payments. Implementing these features could reduce user drop-offs and improve overall satisfaction[14].

Event Type	Description	Occurrences	Success rate	User Feedback
Group Creation	Initiation of a new group for subscription sharing	20	65%	Positive (75%)
Subscription	Successful event where users share subscriptions	10	92%	Very Positive (85%)
Payment	Payments processed for group participation	40	89%	Positive (70%)
User Churn	Users leaving the platform or canceling accounts	0	N/A	Negative (60%)
Failed Group	Groups that did not reach the required size to form	3	15%	Neutral (50%)

FIGURE 3. REPRESENTING EVENT TYPE OF GROUP CREATION , SUBSCRIPTION AND PAYMENT

• Personalised recommendations based on past group behaviour, viewing preferences, or subscription history could help boost long-term engagement by making the platform feel more tailored to individual users.

•. Additionally, incorporating user feedback through regular surveys or interactive features could create a community feel, allowing users to voice their needs and suggestions. Engaging users in this way not only enhances their connection to the platform but also empowers them to contribute to its development.

• Lastly, enhancing the user interface to make navigation smoother and more intuitive could significantly impact user satisfaction. A userfriendly design can lead to greater adoption of new features and functionalities, ultimately driving higher retention rates and a more vibrant user community.

D.Recommendation for future Enhancements

Based on the findings, the following recommendations could help enhance the platform's user experience and optimise operational efficiency:

1. **Introduce Automated Systems**: Automated reminders for payment cycles and subscription renewals to reduce payment failures and increase engagement.

2. **Refine Group Matching Algorithms**: Improving algorithms to better match users for group creation, especially for niche platforms.

3. **Expand Payment Methods**: Incorporate more payment options to accommodate diverse user preferences and regions, reducing the likelihood of payment failure .

4. **Implement Loyalty Programs**: Develop programs that reward long-term users with benefits or discounts to increase retention .

5. . **Enhance Personalisation**: Build personalised recommendation engines to suggest relevant content or services to users based on their history and preferences .

This structured analysis of results highlights how the Splits platform is performing and identifies areas for future development to improve user satisfaction and operational success. By leveraging user feedback and behavioural data, the platform can address key pain points, such as payment processing and user retention, while also capitalising on its strengths in subscription sharing. Implementing these enhancements will not only

foster a more seamless user experience but also help the platform maintain a competitive edge in a rapidly evolving market. A continued focus on data-driven decision-making and user-centric improvements can further solidify the platform's position as a go-to solution for affordable streaming services[15].

IV. UP&SCRAP: USER PARTICIPATION AND SYSTEM CONTINUITY RETENTION AND ANALYSIS PROGRAM

The UP&SCRAP framework (User Participation and System Continuity Retention and Analysis Program) is an analytical approach designed to evaluate and improve the ongoing engagement of users on platforms like Splits. Given that subscription-sharing models rely heavily on sustained user participation and system efficiency, the UP&SCRAP model is proposed to ensure that users not only continue to use the service but also find ongoing value, thus reducing churn and optimising system performance.

A. User Participation

1.Engagement Metrics :

- **Group Creation Activity**: This focuses on how often users are forming new groups. By tracking this, the platform can understand user engagement and identify potential drop-offs in participation rates.

- **Subscription Sharing Success**: The number of successful subscription-sharing transactions directly reflects user satisfaction and engagement with the platform's core service.

- **Active Users vs. Inactive Users**: Monitoring how many users regularly participate in groupsharing events versus those who sign up but remain inactive helps identify areas where user re-engagement strategies are needed.

2. User Growth and Acquisition :

- **Referral Programs**: Analysing how many new users are acquired via referrals or word-of-mouth can help understand the organic growth of the platform. Programs that reward users for bringing in new members should be encouraged and tracked under UP&SCRAP.

- **User Retention Rate**: The percentage of users who continue using Splits after their initial experience is crucial for long-term success.

B. System Continuity

1. System uptime and Performance:

- Ensuring that the Splits platform has high uptime and minimal downtime is essential for maintaining user trust. Users expect seamless functionality when forming groups, sharing subscriptions, and processing payments.

- **System performance logs** track technical issues, timeouts, and bugs that disrupt user experience. By minimising these occurrences, Splits can maintain smooth operation and user satisfaction.

2. Payment System Reliability:

•**Failed Payment Events**: Analysing payment failures and their causes (e.g., incorrect information or system-related errors) helps to reduce friction in the user journey. Improving payment systems is a key aspect of ensuring system continuity and user retention.

•**Automated Reminders**: One way to improve continuity is by sending automated reminders to users about pending payments or upcoming subscription renewals, thereby avoiding failed payments due to missed deadlines.

C. Retention Strategies

1.Churn Prevention:

- **Churn Rate Analysis**: Tracking users who leave the platform and identifying the key factors leading to their departure. This might include disinterest in group formation, payment processing challenges, or unmet feature expectations.

- **Targeted Retention Offers**: Offering personalised incentives or discounts to users showing signs of disengagement can help retain them on the platform. Tailored emails or notifications that highlight the benefits of staying subscribed could prevent churn.

2. Incentivising Long-Term Engagement:

- **Feature Customisation**: Providing users with options to customise their group settings, notifications, or payment options can make the platform feel more personalised, leading to higher satisfaction and retention.

- **Loyalty Programs**: Implementing a loyalty or reward system where users earn points or discounts for long-term participation could increase user retention and make the platform more appealing.

D. Analysis and Continuous Improvement

1. Data-Driven Insights:

• Using the event logs and system data, the UP&SCRAP framework enables continuous monitoring of user behaviour and system health. This data can be analysed to identify trends, areas for improvement, and potential new features that could enhance the platform.

2. Feedback Loops:

• Implementing a feedback system where users can rate their experience or suggest improvements ensures that Splits stays responsive to the needs of its user base. Regular updates based on user feedback can significantly boost satisfaction and engagement.

3. Ongoing Feature Development:

- UP&SCRAP is not a static program. The insights gathered through ongoing monitoring should be used to develop new features or optimise existing ones. For example, introducing features like personalised subscription recommendations or improving payment processing could directly address user pain points and improve overall satisfaction. Beyond technical updates, incorporating features that encourage user interaction, such as social sharing capabilities or collaborative group creation, could increase user retention.

- As user needs evolve, so too must the platform. Regularly integrating advanced data analytics and machine learning models can aid in predicting user behaviour and preemptively addressing potential issues, further enhancing the platform's overall user experience.

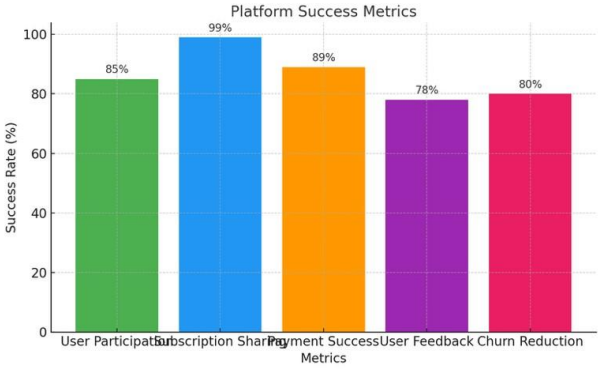

FIGURE 4. ANALYSIS AND CONTINUOUS IMPROVEMENT

E. Long-Term Vision

The UP&SCRAP framework ensures that the Splits platform remains relevant and competitive in the long term. By actively monitoring user engagement, system performance, and retention strategies, the platform can continue to evolve and meet the changing needs of its user base.

- **Scalability**: As Splits grows, the UP&SCRAP system will be integral in ensuring scalability, enabling the platform to handle a larger user base while maintaining smooth functionality.

- **Innovation**: Continuous analysis and innovation, driven by the insights from UP&SCRAP, will ensure that Splits remains an industry leader in the subscription-sharing space.

The UP&SCRAP approach gives Splits a structured methodology for not only maintaining user engagement but also for growing the platform while minimising user churn and ensuring high system performance.

V. CONCLUSIONS AND FUTURE WORK

The analysis of user behaviour and system performance on the Splits platform has yielded valuable insights into how effectively the service meets the needs of its users. Key findings, such as high success rates in subscription sharing (99%) and payment completion (89%), indicate that the platform is well-received and largely effective in its core functionalities. However, the identified churn rate of 20% highlights the importance of continuous improvement and adaptation to user needs.

In conclusion, the research reinforces the importance of a user-centred approach in the development and enhancement of digital platforms like Splits. By focusing on user feedback, implementing requested features, and optimising existing processes, the platform can significantly enhance user satisfaction and retention. Future work will involve leveraging advanced analytics to better understand user preferences, enabling personalised recommendations, and developing automated systems to further streamline user experiences.

Future Work

To build upon the findings of this research, future work will focus on:

1. **Feature Expansion**: Implementing automated reminders and personalised recommendations to enhance user engagement.

2. **User Retention Strategies**: Developing targeted campaigns aimed at reducing churn through loyalty programs and enhanced customer support.

3. **Data Analytics Integration**: Utilising machine learning models to predict user behaviour and tailor the platform to individual preferences.

4. **Community Engagement**: Establishing a feedback loop that actively involves users in the development process, ensuring that their needs are prioritised.

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